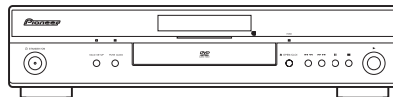


Service Manual



DV-LX50

ORDER NO.
RRV3682

DVD PLAYER

DV-LX50

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Region No.	Remarks
DV-LX50	WYXZT5	AC 220 V to 240 V	2	
DV-LX50	WYXZTUR5	AC 220 V to 240 V	5	



For details, refer to "Important Check Points for good servicing".

1 2 3 4

SAFETY INFORMATION



This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

B

WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

LASER DIODE CHARACTERISTICS

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 780 nm

C

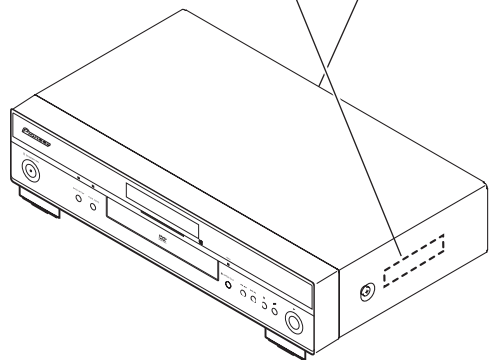
LABEL CHECK

Location: inside of the unit

CAUTION : CLASS 1M LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. 726000A140 SH
Vorsicht : KLASSE 1M LASER Strahlung: Bei geöffnetem Gerät nicht mit optischen Geräten in den Laserstrahl blicken.
PRECAUCIÓN : RADIACIÓN LASER CLASE 1M. AL ABRIR NO MIRAR DIRECTAMENTE CON INSTRUMENTOS ÓPTICOS.
VIKTIGT : KLASSE 1M LASER STRÄLNING: NÄR APPARATEN ÄR ÖPPEN, TITTA INTE RAKT IN I DEN. SPECIELLT INTE OM DU HAR GLASÖGON PÅ DIG.
Varoitus! : Luokka 1M:n lasersäteily: Älä koskaan katso laitteen sisään sen ollessa auki-ei myöskään silmälaseilla tai muilla optisilla laitteilla!
ADVARSEL : LASERSTRÅLER KLASSE 1M KIG IKKE DIREKTE IND I APPARATET, NÄR DETTE ER ÅBENT. IS/ER IKKE MED BRILLER ELLER ANDRE OPTISKE OBJEKTER.

CLASS 1
LASER PRODUCT

(Printed on the Rear Panel)



Additional Laser Caution

- 1.
- Laser diode is driving with Q2303,Q2305(650nm LD) and Q2302, Q2304(780nm LD)on the DVD MT PCB Assy. Therefore, when short-circuit between the emitter and collector of these transistors or the base voltage is supplied for transistors turn on, the laser oscillates. (failure mode)
 - In the test mode * , there is the mode that the laser oscillates except for the disc judgment and playback. LD ON mode in the test mode oscillates with the laser forcibly.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

* : See page 37.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SERVICE PRECAUTIONS

1.1 NOTES ON SOLDERING

NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C.
Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Do NOT use a soldering iron whose tip temperature cannot be controlled.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
GYP1006 1.0 in dia.
GYP1007 0.6 in dia.
GYP1008 0.3 in dia.

1.2 WHEN REPLACING DVD DECK

WHEN REPLACING DVD DECK

[Removing the DVD Deck]

Before removing Pick Up PCB and DVD PCB connector, short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

[Installing the DVD Deck]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

NOTE

- Before your operation, please read "PREPARATION OF SERVICING".
- Use the Lead Free solder.
- Manual soldering conditions
 - Soldering temperature: $320 \pm 20^{\circ}\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to prevent the Flux smoke from it.

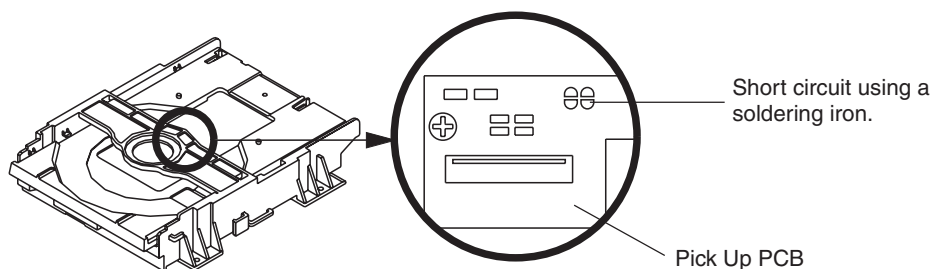


Fig. 1

1.3 DISC REMOVAL METHOD

DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Slide the Rack Loading (White) toward the arrow direction by using a minus driver to release the lock.
(Refer to Fig. 1)
2. Manually open the Tray.

NOTE: Please strongly pushing Rack Loading (White) to release the lock because the tray doesn't go out easily.

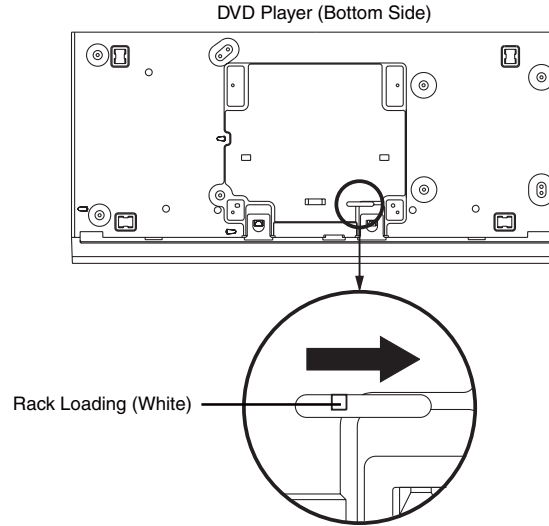


Fig. 1

PARENTAL CONTROL - RATING LEVEL 4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Set the DVD to the Stand-by Mode.
2. Press and hold the 'STOP' key on the front panel.
3. Simultaneously press and hold the POWER key on the front panel.
4. The 4 digit password has now been cleared.

NOTE: The above procedure will reset ALL of the player's settings to the default factory state.

PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity. Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened. Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

¥Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.

¥Soldering iron with ground wire or ceramic type is used.

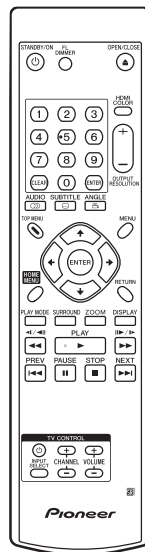
¥A worker needs to use a ground conductive wrist strap for body.

2. SPECIFICATIONS

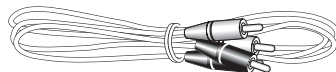
2.1 ACCESSORIES

● Accessories

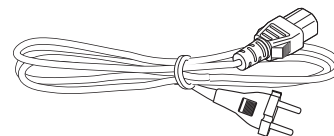
- Remote control ×1
(07650PG021)



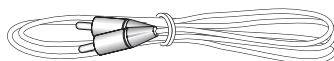
- Audio cable ×1
(06CPBA2008)



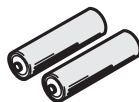
- Power cable ×1
(120S155806)



- Video cable ×1
(06CPBA2005)



- Dry cell batteries ×2
(AA/R6P)



- Warranty Card
- Operating Instructions

2.2 SPECIFICATIONS

- A
- General

Power requirementsAC 220 V to 240 V, 50Hz/60Hz

Power consumption15 W

Power consumption (standby).0.8 W

Weight5.3 kg

Dimensions420 mm (W) x 102 mm (H) x 314 mm (D)

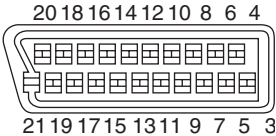
Operating temperature+5 °C to +35 °C

Operating humidity5% to 85% (no condensation)

AV Connector (21-pinconnector assignment)

- AV connector output.21-pin connector-

This connector provides the video and audio signals for connection to a compatible colour TV or monitor.
- B



- PIN no.

1.Audio 2/R out

3.Audio 1/L out

4.GND

7.B out

8.Status

11.G out

15.R out

17.GND

19.Video out

21.GND
- C

- HDMI output

HDMI output19 pin

- Component video output

Y (luminance) - Output level1 Vp-p (75Ω)

PB (color) - Output level0.7 Vp-p (75 Ω)

PR (color) - Output level0.7 Vp-p (75 Ω)

Jack.RCA
- D

- S-Video output

Y (luminance) - Output level.1 Vp-p (75 Ω)

C (color) - Output level.286 mVp-p (75 Ω)

Jack.S-Video
- E

- Video output

Output level1 Vp-p (75 Ω)

Jack.RCA

- Audio output (1 stereo pair)

Output levelDuring audio output

200 mVrms (1kHz, -20dB)

Number of channels2

JacksRCA
- F

- Audio output (multi-channel/L, R, C, SW, SL, SR)

Output level.During audio output

200 mVrms (1 kHz, -20 dB)

Number of channels6

JacksRCA

- Audio characteristics

Frequency response4Hz to 44kHz

S/N ratio118dB

Dynamic range.108dB

Total harmonic distortion.0.0010%

Wow and flutterLimit of measurement

(±0.001% W. PEAK) or lower

- Digital output

Coaxial digital output.RCA

Optical digital output.Optical

- Other terminals

Control in.Minijack(3.5 ø)

- Accessories

Remote control.1

AA/R6P dry cell batteries2

Audio cable.1

Video cable1

Power cable.1

Warranty card.1

Operating instructions

The specifications and design of this product are subject to change without notice, due to improvement.

Disc/content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format—see below for further compatibility information.

Please also note that recordable discs cannot be recorded using this player.



DVD-Audio DVD-Video DVD-R DVD-RW



Audio CD Video CD CD-R CD-RW



Fujicolor CD

- This unit will play DVD+R/+RW discs.
- is a trademark of DVD Format/Logo Licensing Corporation.
- is a trademark of FUJIFILM Corporation.
- Also compatible with KODAK Picture CD

This player supports the IEC's SuperVCD standard. Compared to the VideoCD standard, SuperVCD offers superior picture quality, and allows two stereo soundtracks to be recorded. SuperVCD also supports the widescreen size.



Super VCD

About DualDisc playback

A DualDisc is a new two-sided disc, one side of which contains DVD content video, audio, etc. while the other side contains non-DVD content such as digital audio material.

The non-DVD, audio side of the disc is not compliant with the CD audio specification and therefore may not play.

The DVD side of a DualDisc plays in this product. DVD-Audio content will not play.

For more detailed information on the DualDisc specification, please refer to the disc manufacturer or disc retailer.

CD-R/-RW compatibility

- Compatible formats: CD-audio, Video CD/Super VCD, ISO 9660 CD-ROM* containing MP3, WMA, MPEG-4 AAC, JPEG or DivX video/WMV files
*ISO 9660 Level 1 or 2 compliant. CD physical format: Mode1, Mode2 XA Form1. Romeo and Joliet file systems are both compatible with this player.
- Multi-session playback: No
- Unfinalized disc playback: No
- File structure (may differ): Up to 299 folders on a disc; up to 648 folders and files (combined) within each folder

DVD+R/+RW compatibility

Only DVD+R/DVD+RW discs recorded in 'Video Mode (DVD Video Mode)' which have been finalized, can be played back. However, some editing made during the recording may not be played back accurately.

DVD-R/-RW compatibility

- Compatible formats: DVD-Video, Video Recording (VR)*
* Edit points may not play exactly as edited; screen may go momentarily blank at edited points.
- Unfinalized playback: No
- MP3/WMA/MPEG-4 AAC/JPEG or DivX video/WMV file playback on DVD-R/-RW: No

Compressed audio compatibility

- Compatible formats: MPEG-1 Audio Layer 3 (MP3), Windows Media Audio (WMA), MPEG-4 AAC
- Sampling rates: 32kHz, 44.1kHz or 48kHz
- Bit-rates: Any (128 kbps or higher recommended)
- VBR (variable bit rate) MP3/WMA/MPEG-4 AAC playback: No
- WMA lossless encoding compatible: No
- DRM (Digital Rights Management) compatible: No (DRM-protected audio files will *not* play in this player—see also DRM in the *Glossary* on page 45)
- File extensions: .mp3, .wma, .m4a (these must be used for the player to recognize MP3, WMA and MPEG-4 AAC files—do not use for other file types)

About MPEG-4 AAC

Advanced Audio Coding (AAC) is at the core of the MPEG-4 AAC standard, which incorporates MPEG-2 AAC, forming the basis of the MPEG-4 audio compression technology. The file format and extension used depend on the application used to encode the AAC file. This unit plays back AAC files encoded by iTunes® bearing the extension '**.m4a**'. DRM-protected files will not play, and files encoded with some versions of iTunes® may not play, or filenames may display incorrectly.

Apple and iTunes® are trademarks of Apple Inc., registered in the U.S. and other countries.

WMA (Windows Media™ Audio) compatibility

This player can playback Windows Media Audio content.

WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA content can be encoded by using Windows Media Player for Windows XP, Windows Media Player 9 or Windows Media Player 10 series.

- *Windows Media is a trademark of Microsoft Corporation.*
- *This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from Microsoft Licensing, Inc.*

About DivX video

DivX is a media technology created by DivX, Inc. DivX media files contain not only video but also include advanced media features like menus, subtitles, and alternate audiotracks. This player can play DivX videos burned on CD-R/-RW/-ROM discs. Keeping the same terminology as DVD-Video, individual DivX video files are called "Titles". When naming files/titles on a CD-R/-RW disc prior to burning, keep in mind that by default they will be played in alphabetical order.

DivX video compatibility

- Official DivX® Ultra Certified product.
- Plays all versions of DivX® video (including DivX® 6) with enhanced playback of DivX® media files and the DivX® Media Format.
- File extensions: .avi and .divx (these must be used for the player to recognize DivX video files). *Note that all files with the .avi extension are recognized as MPEG4, but not all of these are necessarily DivX video files and therefore may not be playable on this player.*

About WMV

WMV is an acronym for Windows Media Video and refers to a video compression technology developed by Microsoft Corporation. WMV content can be encoded by using Windows Media® Encoder.

- This player is compatible with WMV9 files that are encoded by using the Windows Media® Encoder 9 Series, with .wmv as an extension.
- Compatible with size under 720 x 576 pixels/720 x 480 pixels.
- Advanced Profile is not supported.
- DRM-protected video files will not play in this player.

JPEG file compatibility

- Compatible formats: Baseline JPEG and EXIF 2.2* still image files up to a resolution of 3072 x 2048.
* *File format used by digital still cameras.*
- Progressive JPEG compatible: No
- File extensions: .jpg (must be used for the player to recognize JPEG files—do not use for other file types)

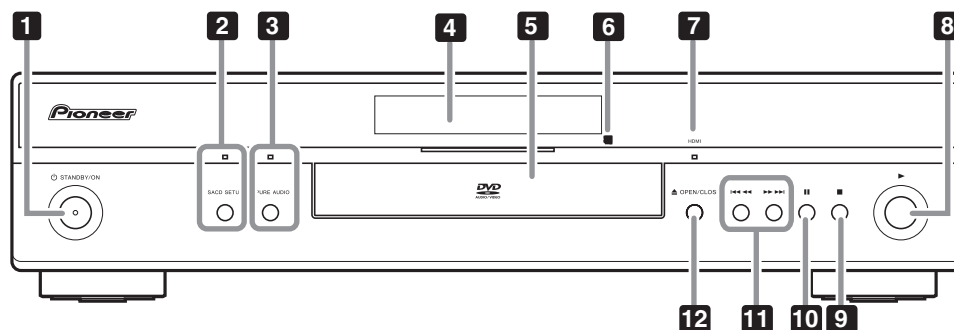
PC-created disc compatibility

Discs recorded using a personal computer may not be playable in this unit due to the setting of the application software used to create the disc. In these particular instances, check with the software publisher for more detailed information.

Discs recorded in packet write mode (UDF format) are not compatible with this player.

Check the DVD-R/-RW or CD-R/-RW software disc boxes for additional compatibility information.

Front panel



1 STANDBY/ON

Press to switch the player on (the power indicator and indicator in the middle of the unit light up when the power is on) or into standby.

2 SACD SETUP

Press to select which part of an SACD disc you want to listen to—stereo audio (**2ch Area**), multi-channel audio (**Multi-ch Area**) and, for hybrid SACDs, standard CD audio(**CD Area**). The indicator lights when an SACD disc is set and SACD Playback is set to **2ch Area** or **Multi-ch Area**.

3 PURE AUDIO

When playback is stopped, press to switch off/on the front panel display and disable the video and digital outputs*. Use this when you want to hear audio from the analog outputs with no interference from other signals (when listening to a DVD-Audio disc, for example). The indicator lights when the Pure Audio feature is switched on. This button only functions when **Pure Audio Button** is set to **Available**.

*These include HDMI, and the coaxial and optical digital outputs.

4 Display

5 Disc tray

6 Remote control sensor

The remote control has a range of up to about 7m.

7 HDMI indicator

Lights when this player is recognized by another HDMI or DVI/HDCP compatible component.

8 (play)

Press to start or resume playback.

9 (stop)

Press to stop the disc (you can resume playback by pressing (play)).

10 (pause)

Press to pause playback. Press again to restart.

11 and

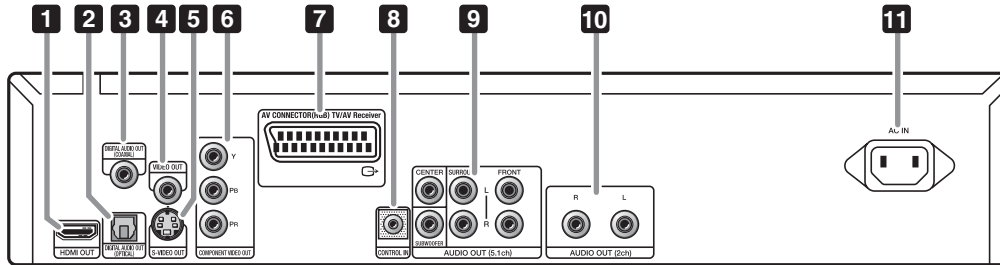
- Skips to the start of the current track, title or chapter, then to previous tracks/titles/chapters.
- Skips to the next track, title or chapter.

12 OPEN/CLOSE

Press to open or close the disc tray.

A

Rear panel



1 HDMI OUT

HDMI output providing a high quality interface for digital audio and video

2 DIGITAL AUDIO OUT OPTICAL

Digital optical audio outputs for connection to a PCM, Dolby Digital, and/or DTS-compatible AV receiver

3 DIGITAL AUDIO OUT COAXIAL

Digital coaxial audio outputs for connection to a PCM, Dolby Digital, and/or DTS-compatible AV receiver

4 VIDEO OUT

Video output (composite) that you can connect to your TV or AV receiver using the supplied video cable

5 S-VIDEO OUT

S-Video output that you can use instead of the VIDEO OUT jacks

6 COMPONENT VIDEO OUT

High quality video output for connection to a TV, monitor or AV receiver that has component video inputs. Connect using a commercially available three-way component video cable

7 AV1 (RGB)-TV

Audio/video output SCART-type AV connector for connecting to a TV or other equipment with a SCART connector. The video output is switchable between video, S-Video and RGB

8 CONTROL IN

Use to control this player from the remote sensor of another Pioneer component with a **CONTROL OUT** terminal and bearing the **SR** mark. Connect the **CONTROL OUT** of the other component to the **CONTROL IN** of this player using a mini-plug cord

9 AUDIO OUT (5.1ch)

Multi-channel (5.1ch) analog audio outputs for connection to an AV receiver with multi-channel analog audio inputs

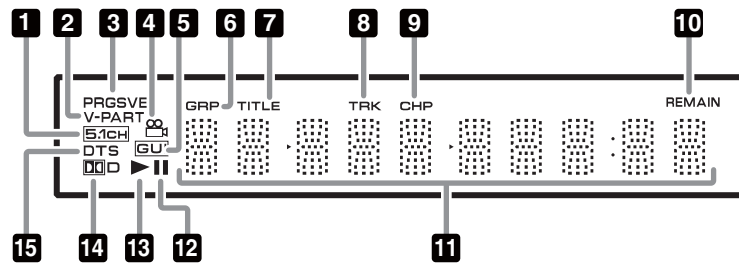
10 AUDIO OUT (2ch)

Stereo analog audio outputs for connection to your TV, AV receiver or stereo system

11 AC IN

Connect the supplied power cord here, then plug into a power

Display



1 5.1CH

Lights when analog 5.1 channel output is selected

2 V-PART

Lights when playing a video part of a DVD disc.

3 PRGSVE

Lights when the video output is 1080i/720p/576p/480p .

4

Lights during multi-angle scenes on a DVD disc.

5 GUI (Graphical User Interface)

Lights when a menu is displayed on-screen.

6 GRP

Indicates that the character display is showing a DVD-Audio group number

7 TITLE

Indicates that the character display is showing a DVD-Video title number.

8 TRK

Indicates that the character display is showing a track number.

9 CHP

Indicates that the character display is showing a DVD chapter number.

10 REMAIN

Lights when the character display is showing the time or number of tracks/titles/chapters remaining.

11 Character display

Lights when a disc is paused.

13

Lights when a disc is playing.

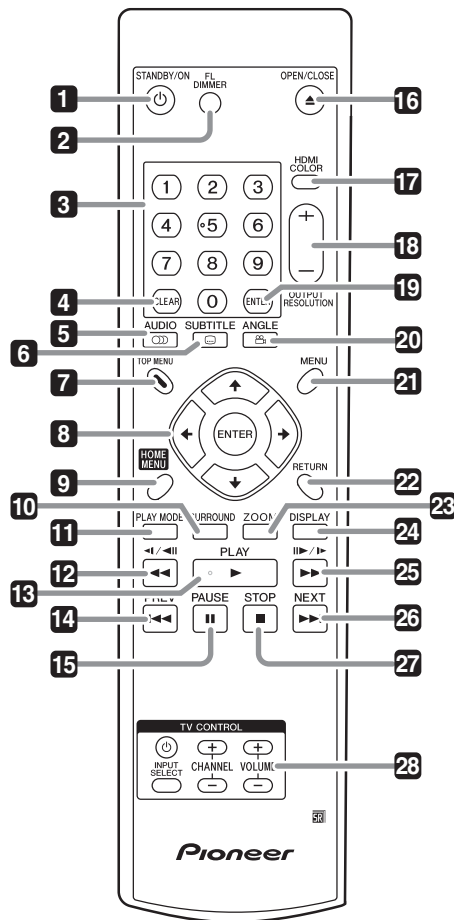
14

Lights when a Dolby Digital soundtrack is playing.

15 DTS

Lights when a DTS soundtrack is playing.

Remote control



9 HOME MENU

10 SURROUND

Press to switch on/off virtual Surround.

11 PLAY MODE

Press to display the Play Mode menu. (You can also get to the Play Mode menu by pressing **HOME MENU** and selecting Play Mode).

Press to jump to the beginning of the current

12 ◀◀ and ◀/▶▶

Use for reverse slow motion playback, frame reverse and reverse scanning.

13 ▶▶ PLAY

Press to start or resume playback.

14 ◀◀◀ PREV

Skips to the start of the current track, title or chapter, then to previous tracks/titles/chapters.

15 || PAUSE

Press to pause playback; press again to restart.

16 ▲ OPEN/CLOSE

Press to open or close the disc tray.

17 HDMI COLOR

Press to control HDMI color.

18 OUTPUT RESOLUTION +/-

press to control output resolution

19 ENTER

Press to execute a command.

20 📐 ANGLE

Press to change the camera angle during DVD multi-angle scene playback.

21 MENU

Press to display a DVD disc (or Divx media files) menu, or the Disc Navigator if a VR format DVD-RW, CD, Video CD , MP3, WMA or JPEG disc is loaded.

1 ⏻ STANDBY/ON

2 FL DIMMER

Press to change the display brightness.

3 Number buttons

4 CLEAR

Press to clear a numeric entry.

5 🗣️ AUDIO

Press to select an audio language/channel option

6 🗣️ SUBTITLE

Press to select a subtitle option

7 TOP MENU

Press to display the top menu of a DVD disc.

8 ENTER & cursor buttons

Use to navigate on-screen displays and menus. Press **ENTER** to select an option or execute a command.

22 RETURN

Returns to the main menu without saving changes.

A

23 ZOOM

Press to change the zoom level.

24 DISPLAY

Press to display information about the disc playing.

25 **▶▶ and ||▶ / ▶**

Use for forward slow motion playback, frame advance and forward scanning.

B

26 ▶▶ NEXT

Skips to the next track, title or chapter.

27 ■ STOP

Press to stop the disc (you can resume playback by pressing ► (play)).

28 TV CONTROL

Press to control user's TV.

C

D

E

F

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

A **Check points after servicing (DVD player)**

To keep the product quality after servicing, confirm recommended check points shown below.

No.	Procedure	Check points
1	Confirm the firmware version on Service Mode.	The version of the firmware must be latest. Update firmware to the latest one, if it is not the latest.
2	Confirm whether the customer complain has been solved. If the customer complain occurs with the specific disc, use it for the operation check.	The customer complain must not be reappeared. Video, audio and operations must be normal.
3	Confirm playback error rates at the innermost and outermost tracks by using the following disc. DVD test disc (GGV1025)	The error rates must be less than 5.0e-4.
4	Play back a DVD. (Menu operation, Title/chapter search)	Audio and operations must be normal.
5	Play back a DVD. (Menu operation, Title/chapter search)	Video, audio and operations must be normal.
6	Check the appearance of the product.	No scratches or dirt on its appearance after receiving it for service.

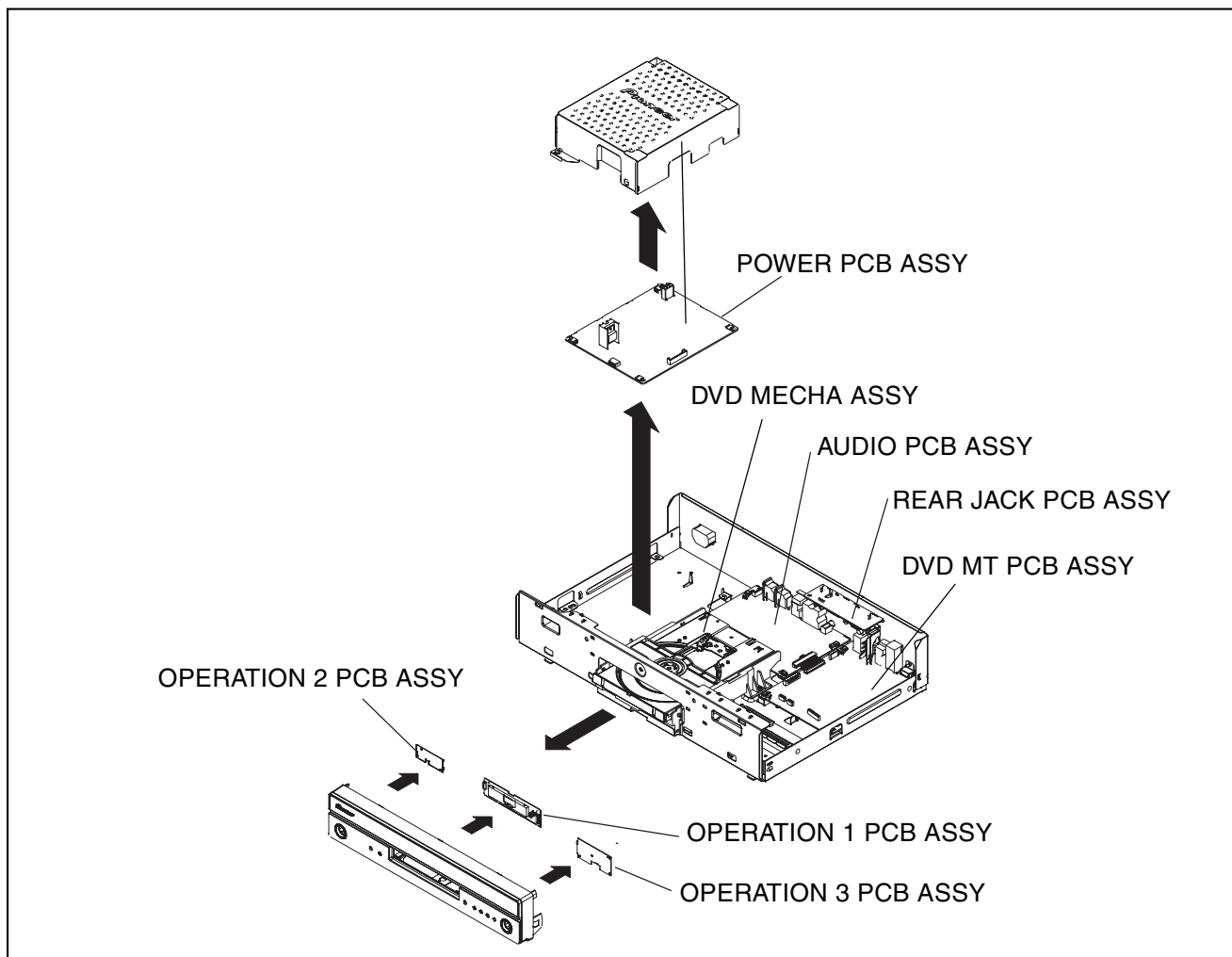
C See the table below for the items to be checked regarding video and audio:

Items to be checked regarding video	Item to be checked regarding audio
Block noise	Distortion
Horizontal noise	Noise
Dot noise	Volume too low
Disturbed image (video jumpiness)	Volume too high
Too dark	Volume fluctuating
Too bright	Sound interrupted
Mottled color	

E

F

3.2 PCB LOCATIONS



Mark No.	Description	Part No.
LIST OF ASSEMBLIES		
1..	DVD MT PCB ASSY (WYXZT5)	A2K802A130
1..	DVD MT PCB ASSY (WYXZTUR5)	A2K807A130
1..	AUDIO PCB ASSY	A2K802AF70
1..	REAR JACK PCB ASSY	A2K802A250
1..	OPERATION 1 PCB ASSY	A2K802A270
1..	OPERATION 2 PCB ASSY	A2K802A280
1..	OPERATION 3 PCB ASSY	A2K802ADF0
⚠ 1..	POWER PCB ASSY	A2K802A240

Mark No.	Description	Part No.
1..	DVD MECHA ASSY	A2K802A650

3.3 JIGS LIST

Jigs list

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	diagnosis
DVD Test Disc (DVD-Video,NTSC)	GGV1025	Operation Check
DVD Test Disc (DVD-Video,PAL)	GGV1101	Operation Check
CD Test Disc	STD-905	Operation Check

Lubricants and Glues list



Name	Lubricants and Glues No.	Remark
Daifree	GEM1036 (ZLX-ME413A)	Refer to "9.3 DVD MECHA SECTION"
Grease	GYA1001 (ZLB-PN397B)	Refer to "9.3 DVD MECHA SECTION"
Grease	GEM1018	Refer to "9.3 DVD MECHA SECTION"
Screw tight	GYL1001	Refer to "9.3 DVD MECHA SECTION"

Cleaning



- Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools	Remark
Pickup lenses	Cleaning liquid : GEM1004	
	Cleaning paper : GED-008	



5



6



7



8



A



B



C



D



E



F



5



6



7



8



4. BLOCK DIAGRAM

4.1 OVERALL WIRING CONNECTION DIAGRAM

A

B

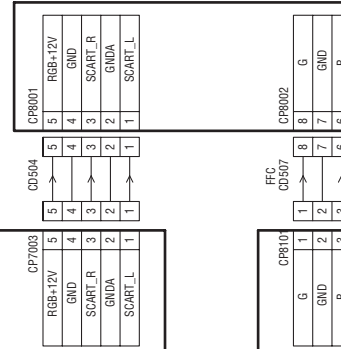
C

D

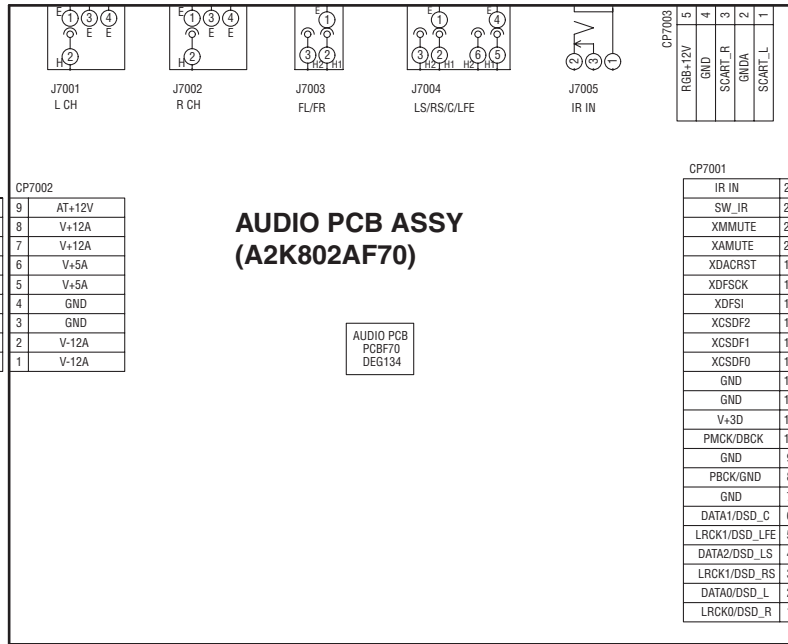
E

F

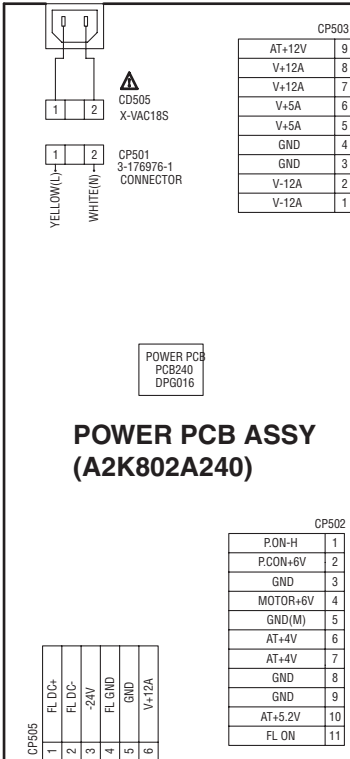
REAR JACK PCB ASSY (A2K802A250)



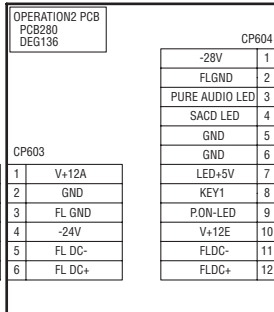
AUDIO PCB ASSY (A2K802AF70)



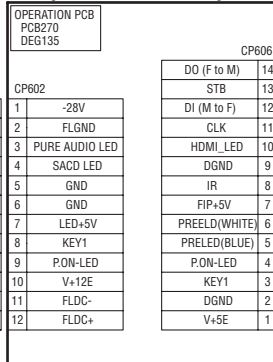
POWER PCB ASSY (A2K802A240)



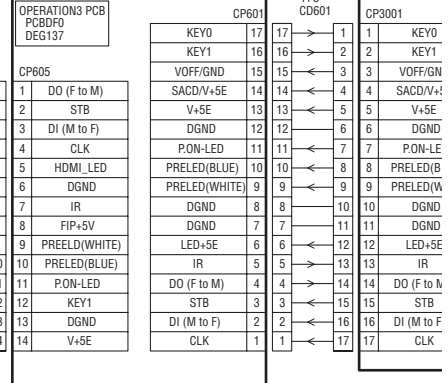
OPERATION2 PCB ASSY (A2K802A280)



OPERATION 1 PCB ASSY (A2K802A270)



OPERATION3 PCB ASSY (A2K802ADF0)

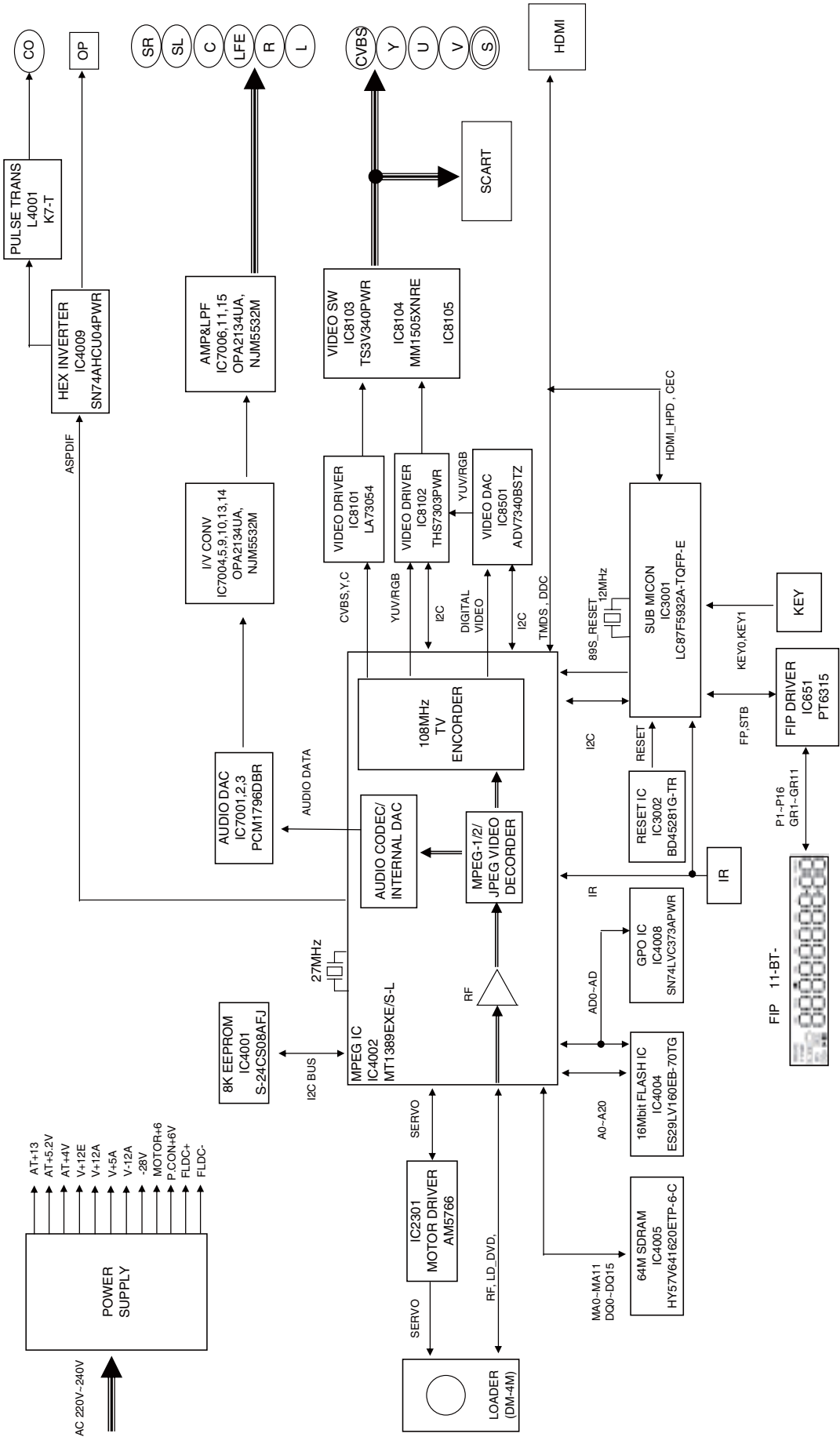


CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

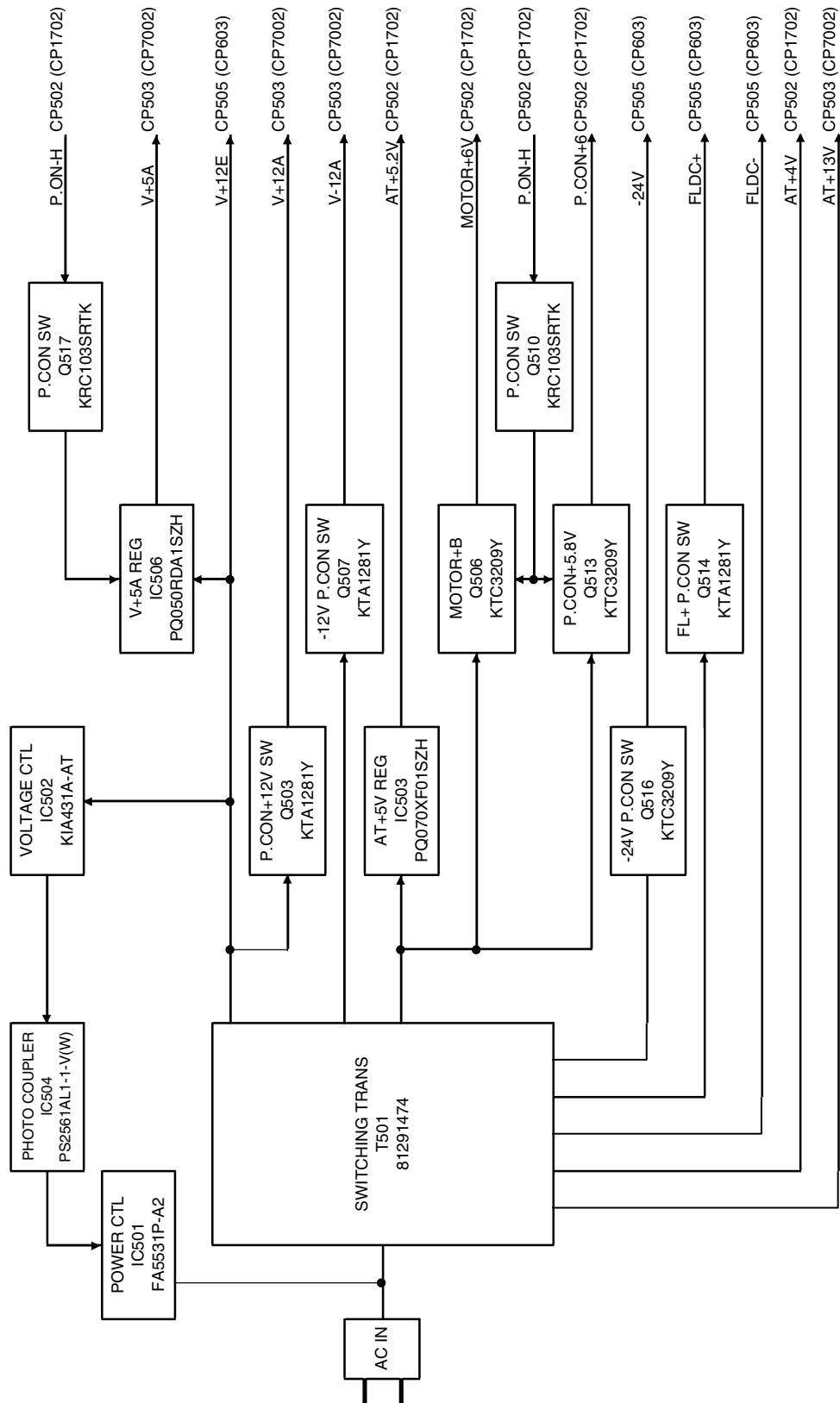
4.2 OVERALL BLOCK DIAGRAM

OVERALL BLOCK DIAGRAM



4.3 POWER BLOCK DIAGRAM

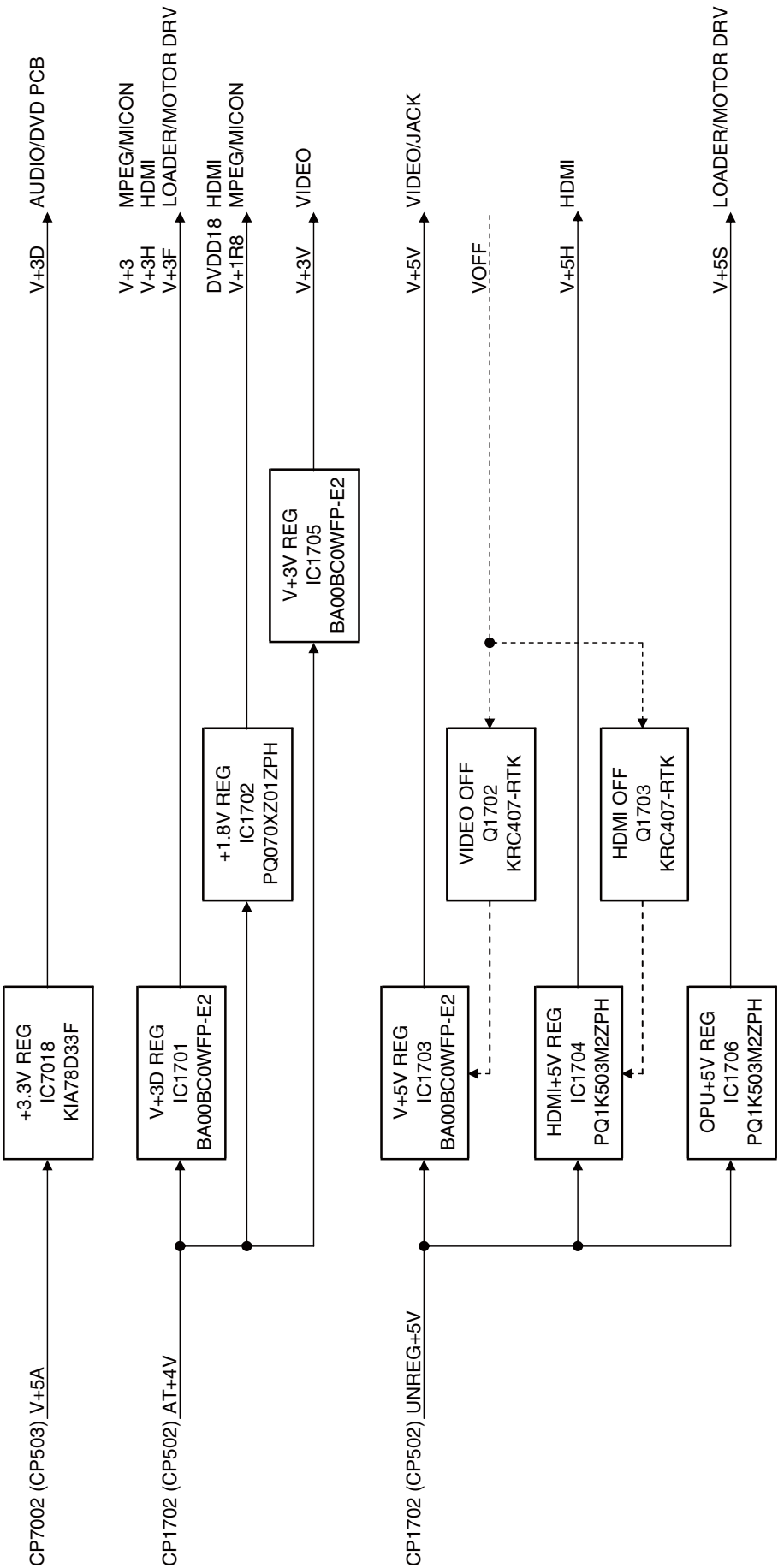
POWER BLOCK DIAGRAM



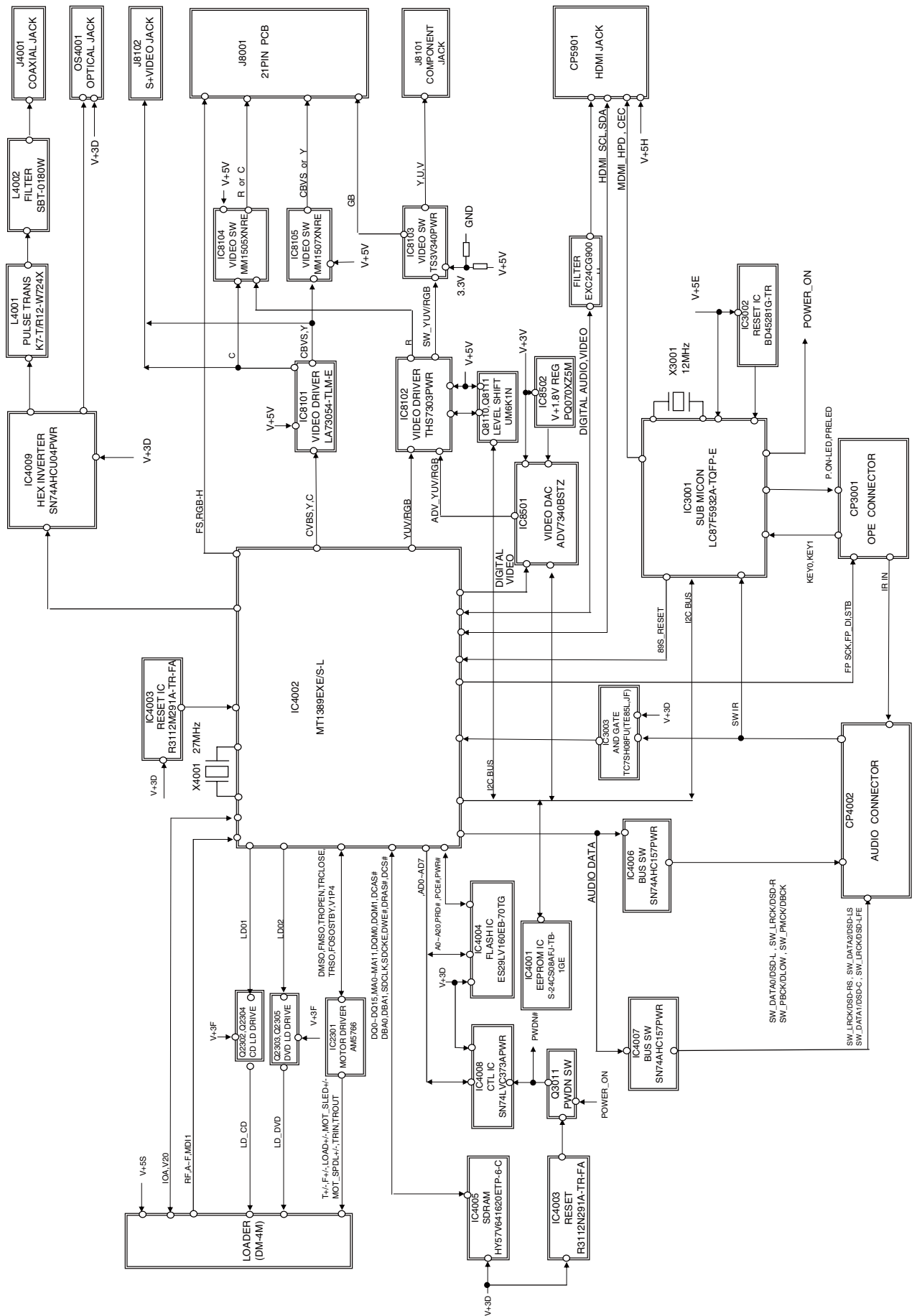
1 2 3 4

4.4 REGULATOR BLOCK DIAGRAM

REGULATOR BLOCK DIAGRAM

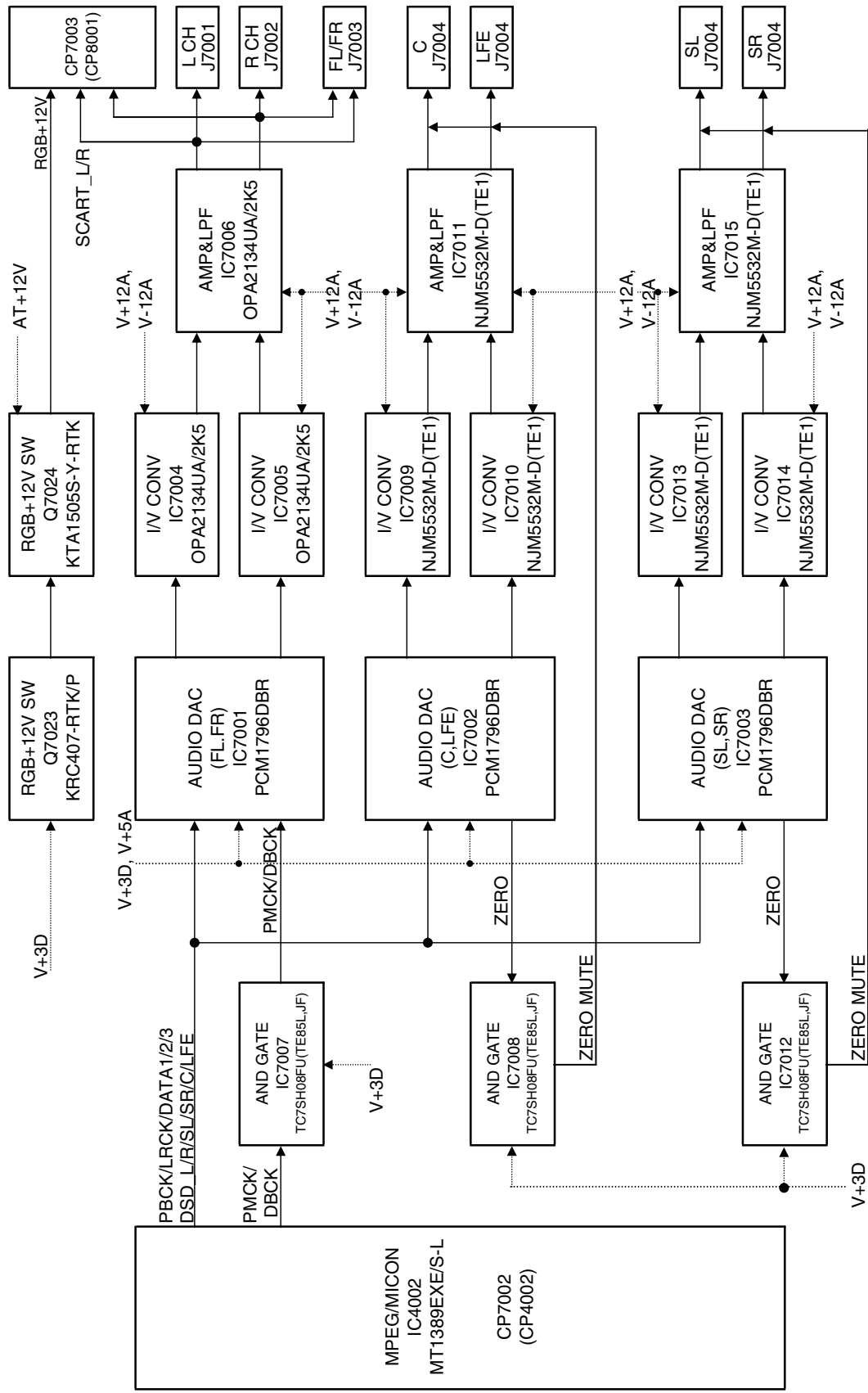


DVD BLOCK DIAGRAM



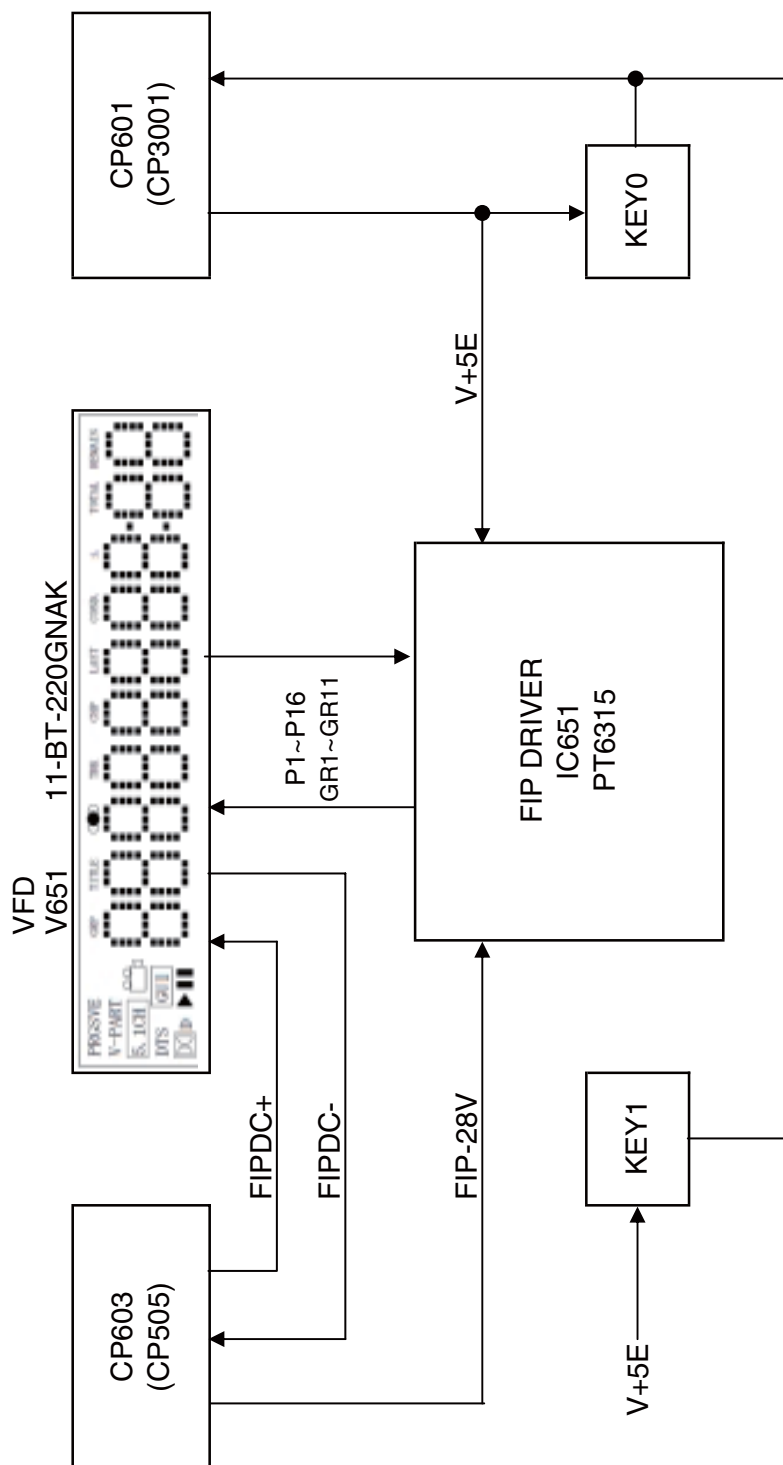
4.6 AUDIO BLOCK DIAGRAM

AUDIO BLOCK DIAGRAM



4.7 OPERATION BLOCK DIAGRAM

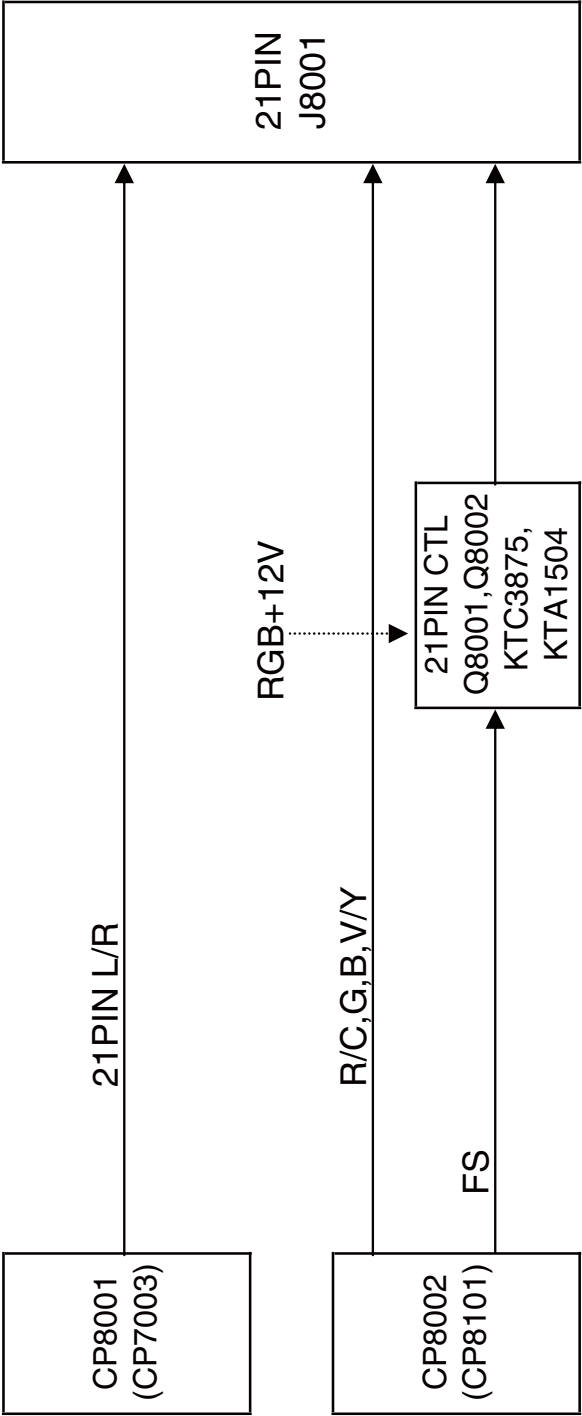
OPERATION BLOCK DIAGRAM



1 2 3 4

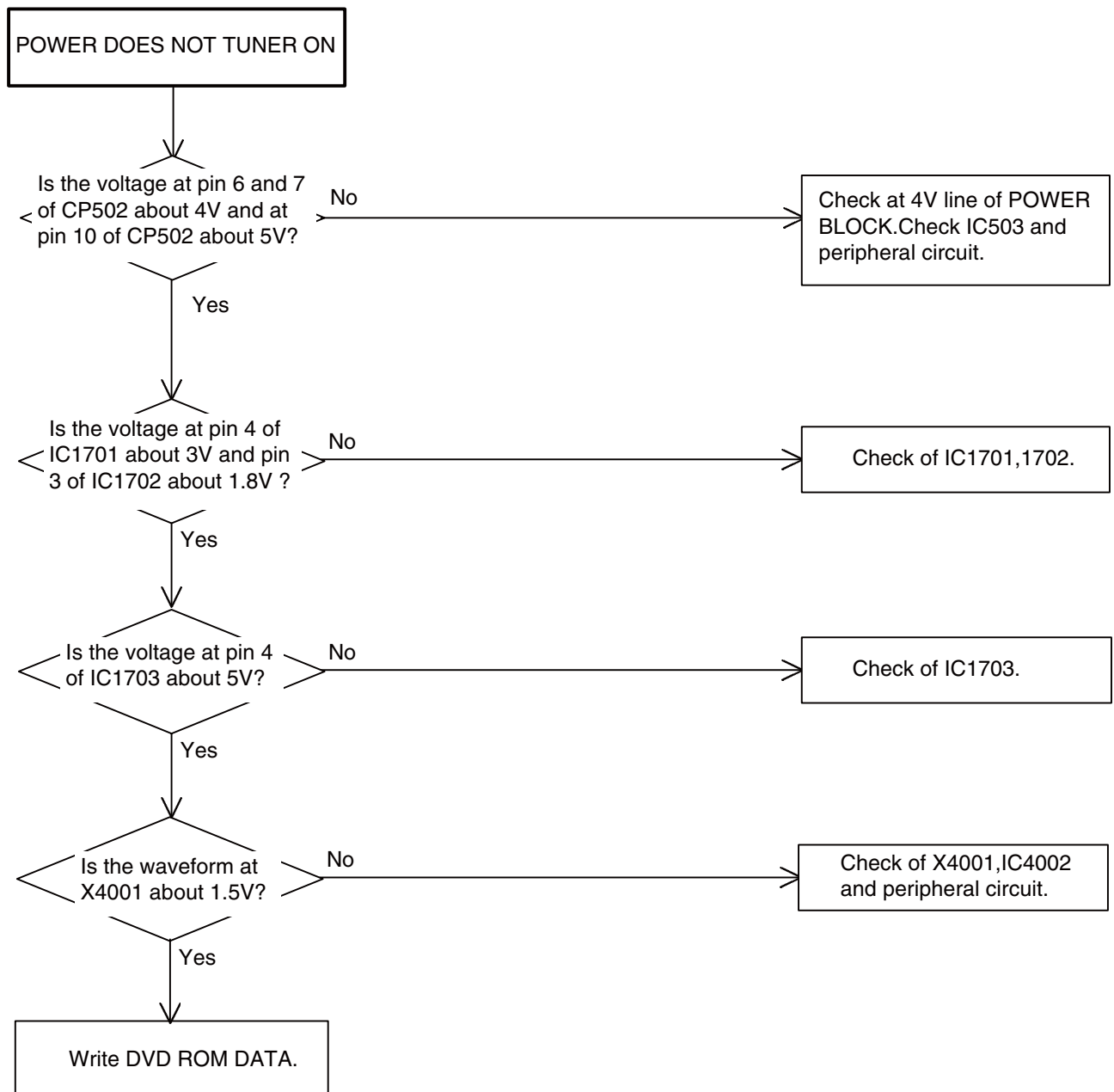
4.8 SCART BLOCK DIAGRAM

SCART BLOCK DIAGRAM



5. DIAGNOSIS

5.1 TROUBLESHOOTING



A

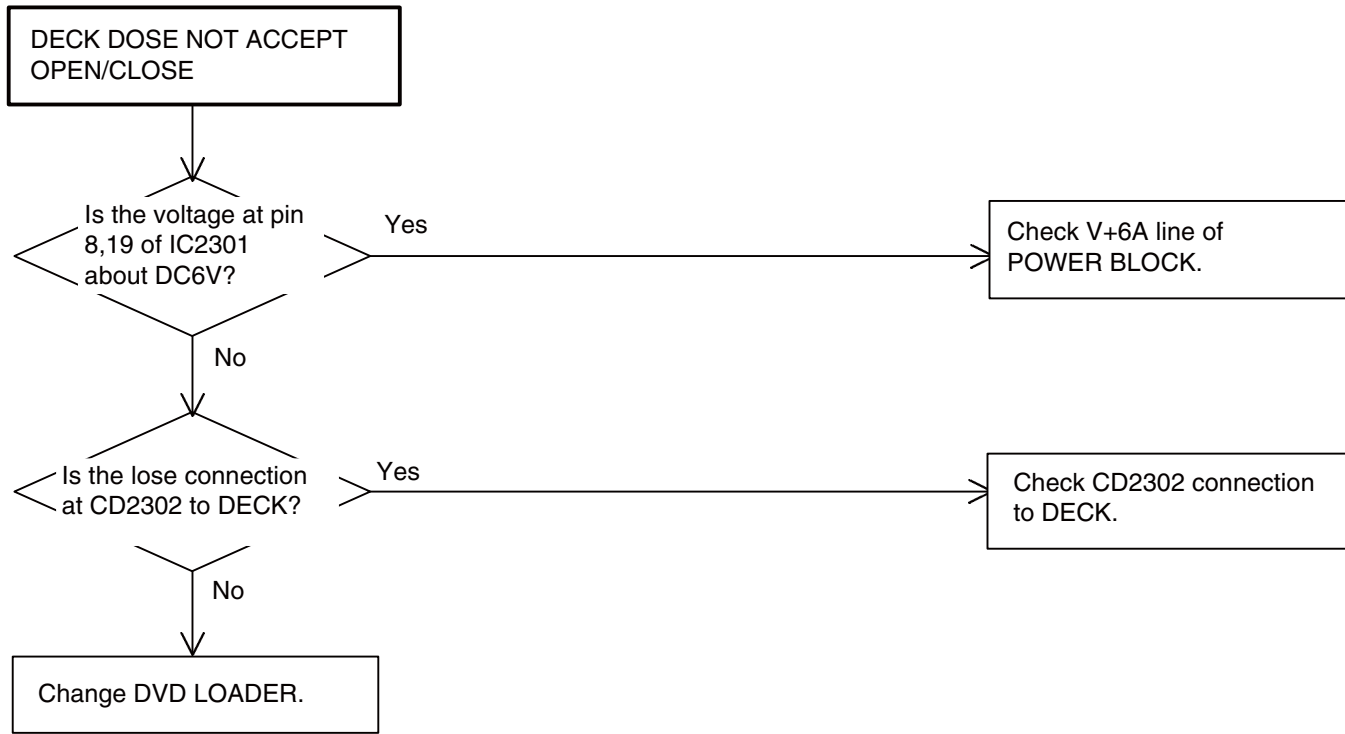
B

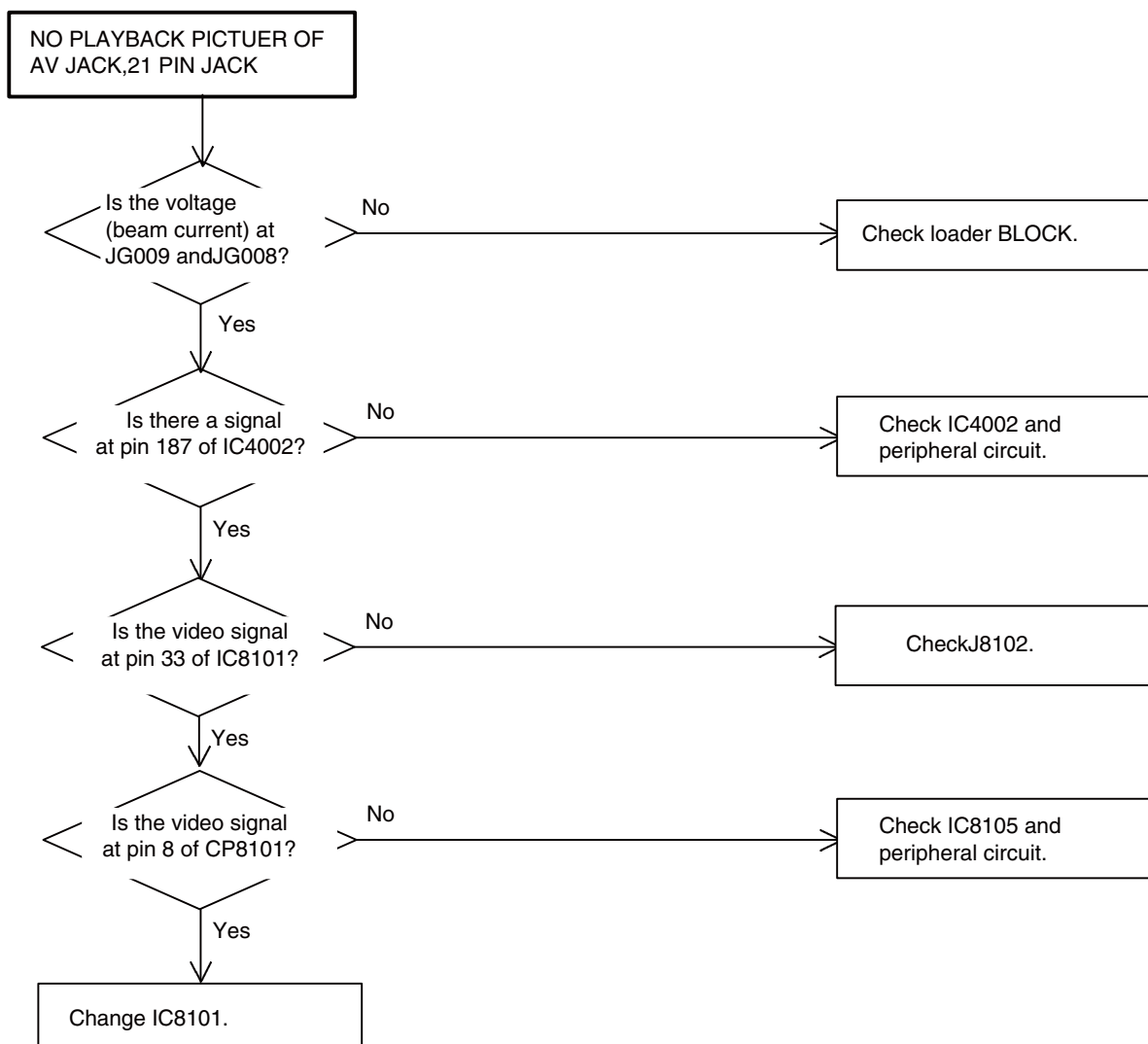
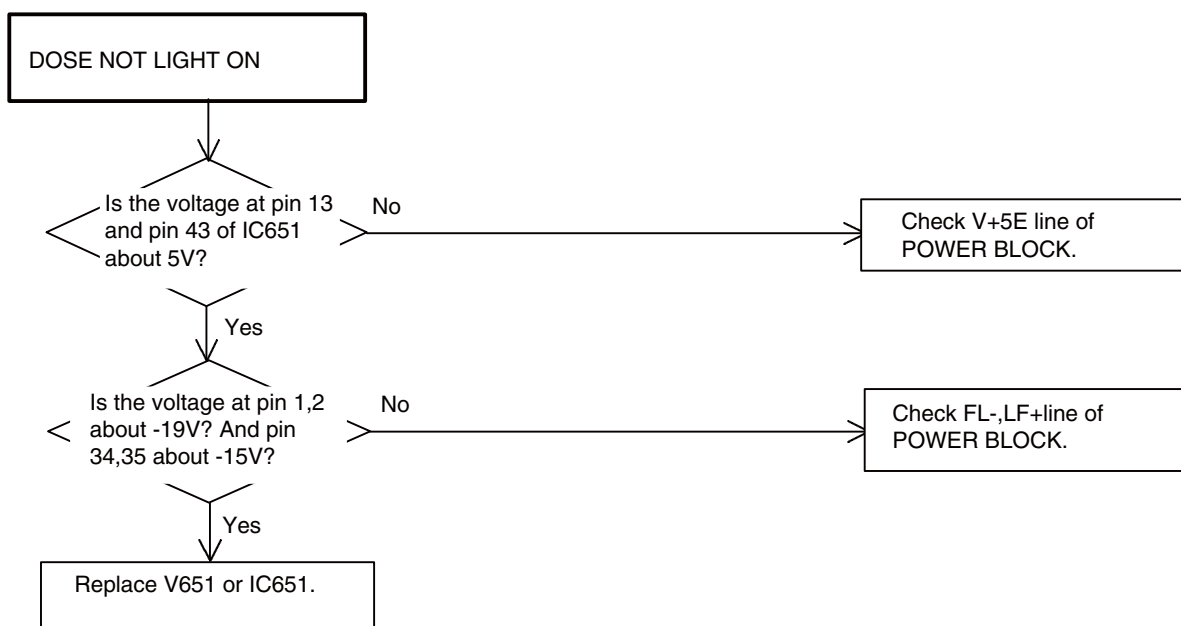
C

D

E

F





A

NO DIGITAL AUDIO ON
PLAYBACK OF COAXIAL JACK

B

Is there waveform
at pin 2 of J4001
about 0.5V?

Yes

Change connection at RCA
cable.

No

C

Is there waveform at pin 215
of IC4002 about 3Vp-p?

No

Check IC4009 and
peripheral circuit.

Yes

Change IC4002.

C

D

NO ANALOG AUDIO ON
PLAYBACK

Is there AUDIO
signal at pins 1 and
7 of IC7006?

Yes

Check J7001,J7002,J7003.

No

E

Is there waveform at pins
2,3,5 and 6 of IC8003?

Yes

Is there voltage at pin 8 of
IC7006 about +12V?

No

Check AT $\pm 12V$.

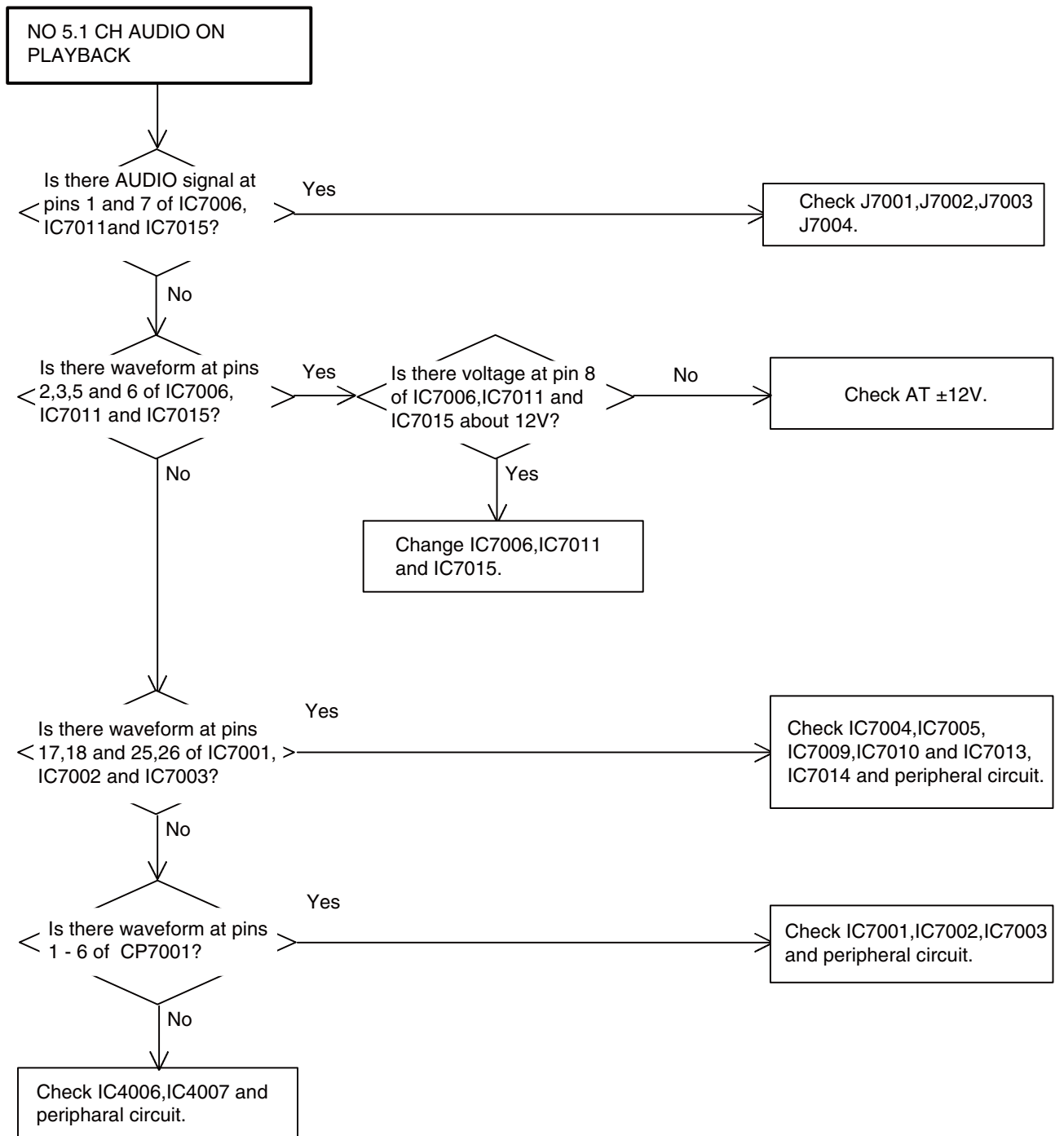
No

Change IC7006.

Yes

Change IC7006.

F



A

B

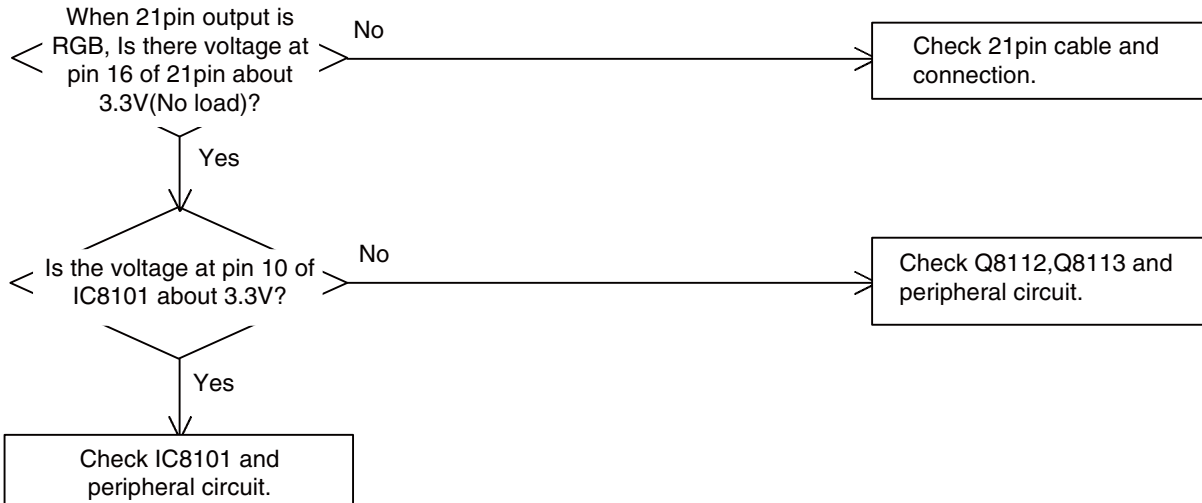
C

D

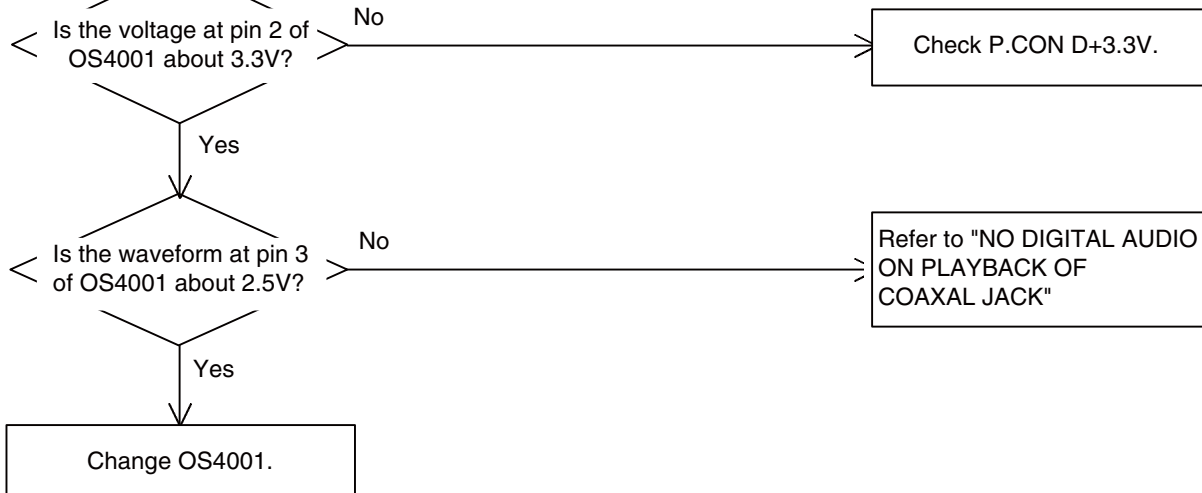
E

F

THE OUTPUT OF 21PIN DOESN'T
CHANGE(COMPOSITE - RGB)



NO OPTICAL OUT



● Symptoms That May Occur When Any Of The Following ICs Is In Failure

IC	Symptoms
EEPROM (DVD MT PCB Assy : IC4001)	User's data cannot be stored in memory. The ID number is lost.
16M Flash ROM (DVD MT PCB Assy : IC4004)	The power cannot be turned on. Downloading of the firmware cannot be performed.
DVD IC (DVD MT PCB Assy : IC4002)	Any kind of symptoms (no power, a failure in any of the servo, video and audio systems, etc.) may be generated, because the DVD processing is performed by a single chip.
64M SDRAM (DVD MT PCB Assy : IC4005)	No power. Block noise is generated during playback.

5.2 METHOD FOR DIAGNOSING DEGRADATION OF THE LDS ON THE PICKUP ASSY

Case when this diagnosis is required :

When playback of any disc, including a test disc (DVD: GGV1025, CD: STD-905), cannot be performed

How to diagnose

In the case mentioned above, degradation of the laser diodes (LDs) mounted on the PICKUP Assy is suspected. Measure the voltage between the two ends of one of the resistors mentioned below.

• No playback of a DVD :

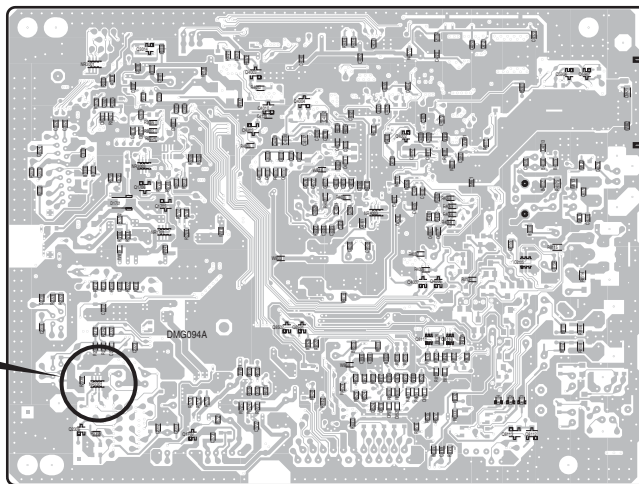
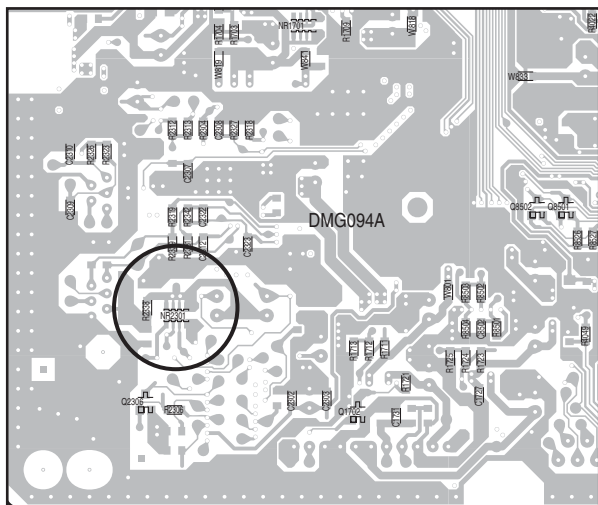
Measure the voltage between the two ends of NR2301 on the DVD MT PCB Assy. If the voltage is 0.4 V or higher, the 650-nm LD is degraded.

• No playback of a CD :

Measure the voltage between the two ends of NR2301 on the DVD MT PCB Assy. If the voltage is 0.4 V or higher, the 780-nm LD is degraded.

If the measurements show degradation of an LD, replace the PICKUP Assy.

DVD MT PCB ASSY

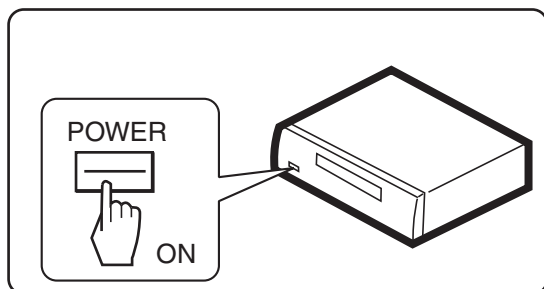


SIDE B

6. SERVICE MODE

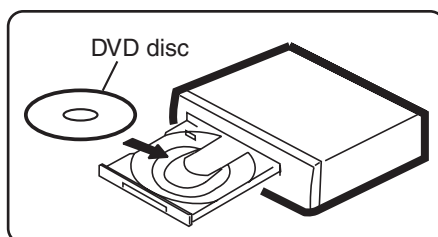
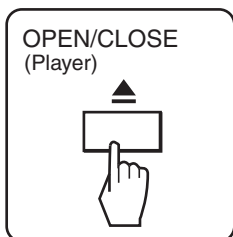
6.1 SERVICE MODE PROCEDURE

POWER ON

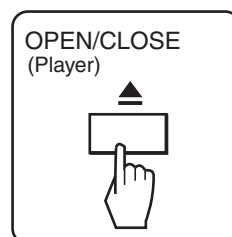


DISC SET

<TRAY OPEN>

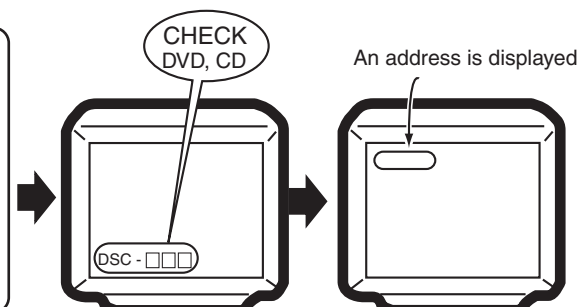
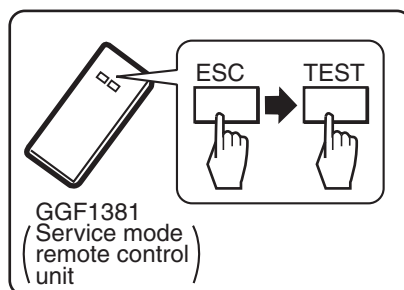
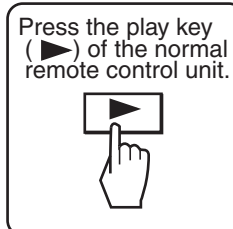


<TRAY CLOSE>



SERVICE MODE: PLAY

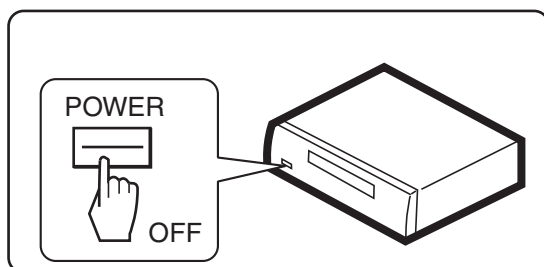
<PLAY>



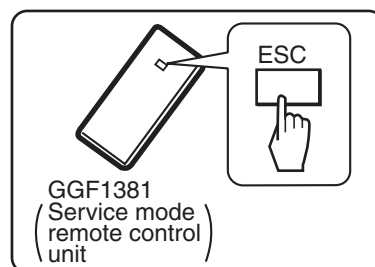
Notes:

- After going into service mode, if you play back the disc, "DISC-NON" is displayed.
- The video signal and the audio signal are outputted during the servicemode.
- The SKIP key and the SCAN key are effective during the service mode.

SERVICE MODE: OFF



OR



A

Service Mode Functional Specification

- ① Service mode entry

In the power ON state, press the [ESC] (A8-5F) key and [TEST / RANDOM] (A8-5E) key in order of the Service mode remote control unit.

- Light the all FL and LEDs.
 - OSD displays test mode.

Note:

- * When pressing the keys of something, the FL displays "NO DISC" and the LED lighting disappears.

- ② Release the Service mode

- Turn off the power.
 - Press the [ESC] (A8-5F) key of the remote control unit.

- ③ LD ON

DVD : Press the [TEST] (A8-5E) and [1] (A8-01) keys in order, and turn on the laser diode (650n).

CD : Press the [TEST] (A8-5E) and [4] (A8-04) keys in order, and turn on the laser diode (780n).

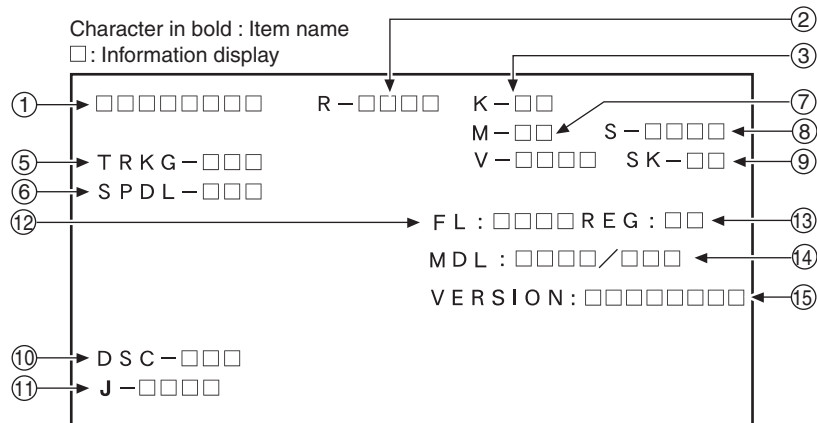
C

D

E

F

6.3 DISPLAY SPECIFICATION OF THE SERVICE MODE



① Address indication

The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)

CD : ID indication [*****]

② Code indication of remote control unit [R - * * * *]

In case of double code, display a 2nd code.

③ Main unit keycode indication [K - * *]

⑤ Tracking status [TRKG - * * *]

Tracking on : [ON]
Tracking off : [OFF]

⑥ Spindle status [SPDL - * * *]

[OFF], [CLV]

⑦ Mechanism (loading) position value [M - * *]

Unknown : [01] or [41]
Open state : [04]
Close state : [08]
During opening : [12]
During closing : [22]

⑧ Slider position [S - * * * *]

In Side Switch ON : [01]
In Side Switch OFF : [00]

⑨ Output video system [V - * * * *]

NTSC system : [NTSC]
PAL system : [PAL]
Automatic setting : [AUTO]

Scart terminal output [SK - * *]

(Display only the WY model which can do the output setting of scart terminal.)

VIDEO : [00]
S-VIDEO : [01]
RGB : [02]

⑩ Disc sensing [DSC - * * *]

The type of discs loaded is displayed.
[DVD], [CD], [VCD], []

⑪ Jitter value [J - * * * *]

Note: Don't use it.

⑫ Version of the FL controller [FL: * * * *]

⑬ Region setting of the player [REG: *]

Setting value : [1] to [6]

⑭ Destination setting of the FL controller [MDL: * * * * / * * *]

Four characters in the front represent code 01.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RL/RD, RAM: /RAM,
LB: /LB, WY: /WY

⑮ Version of the flash ROM [VERSION: * * * * *]

6.4 FUNCTIONAL SPECIFICATION OF THE SHORTCUT KEY

Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Conditions	Remote Control Key Name	Remote ControlCode
Memory clear and region / revision indication		CLEAR (*1)	A8-45
Average value measurement of DVD error rate		5 (*1)	A8-05
CD error rate measurement		5 (*1)	A8-05
Scart terminal output : VIDEO	WY, models equipped with Scart terminal	AUDIO	AF-BE
Scart terminal output : S-VIDEO		SUBTITLE	AF-36
Scart terminal output : RGB		ANGLE	AF-B5
Progressive OFF	Only for progressive models	R_SKIP	A3-9D
Progressive ON		F_SKIP	A3-9C
ZOOM ON (X2 -> X4 -> x1)		ZOOM	AF-37
Service mode indication (error rate indication, etc.)		CHP/TIM (*1)	A8-13
Model information indication		CHAP (*1)	A8-40
Title search Input mode IN Title No. input Search execution		SIDE A (*1) Numbers (*1) PLAY (*1)	A8-4D A8-00 to A8-09 A8-17
Region confirmation mode		A.MON (*1) Numbers (*1)	A8-1E A8-01 to A8-08

*1 : Service mode remote control unit

¥ Service mode indication (ESC + CHP/TIM keys)

ID Address

The error rate is always displayed in exponential notation, e.g., * * * e - *, for both DVDs and CDs.

EDC/ID/AV 1 error history (ID Address, EDC/ID Error, last eight errors)

¥ Calculation of the average error rate (ESC + "5" [Service mode remote control unit] keys)

The average of the last eight error rates is calculated and indicated in exponential notation. After the calculation is completed, "OK" or "NG" is displayed. If "NG" is displayed, the disc tray will open (for both DVDs and CDs)

For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

¥ Indication of model information (ESC + CHAP keys)

The items from 12 to 15 of the SERVICE MODE Indications are displayed. However, in the indications, S in the standard test mode is changed to CHIP VERSION, and M is changed to FL VERSION.

¥ Region confirmation mode (ESC + A.MON [Service mode remote control unit] + "1"- "8" [Service mode remote control unit] keys)

After you press the A.MON key while holding the ESC key pressed and then input the region number, if the number is different from that set in the unit, an error message is displayed, and the tray opens.

A

1

1

9

- 1

□

1

- E

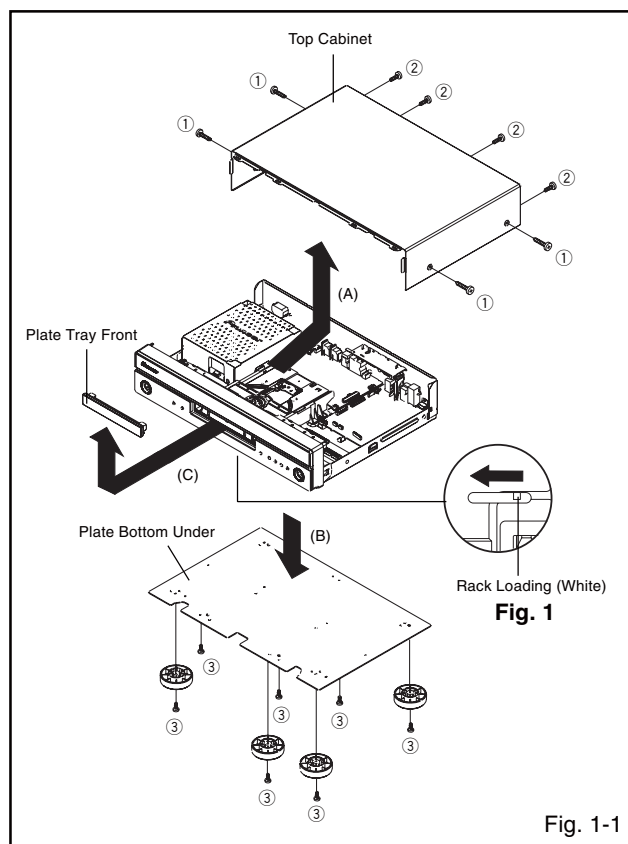
1

7. DISASSEMBLY

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

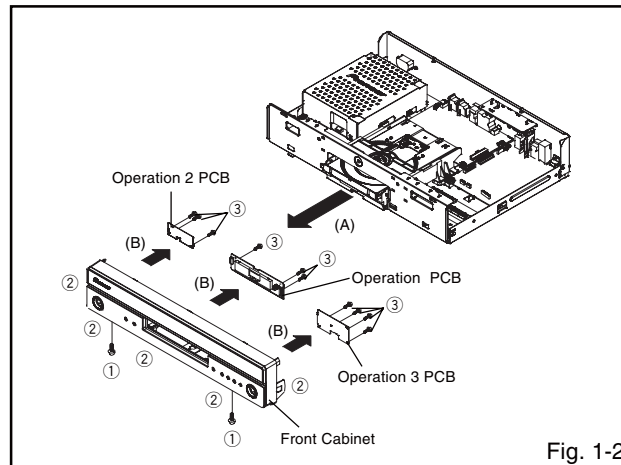
1-1: TOP CABINET/LEG/PLATE BOTTOM UNDER/ PLATE TRAY FRONT (Refer to Fig. 1-1)

1. Remove the 4 screws ①.
2. Remove the 4 screws ②.
3. Remove the Top Cabinet in the direction of arrow (A).
4. Remove the 7 screws ③.
5. Remove the Leg and Plate Bottom under in the direction of arrow (B).
6. Slide the Rack loading (White) which is under Plate Bottom toward the arrow direction by using a minus driver to release the lock. (Refer to Fig. 1)
7. Manually open the Tray.
8. Remove the Plate Tray Front in the direction of arrow (C).



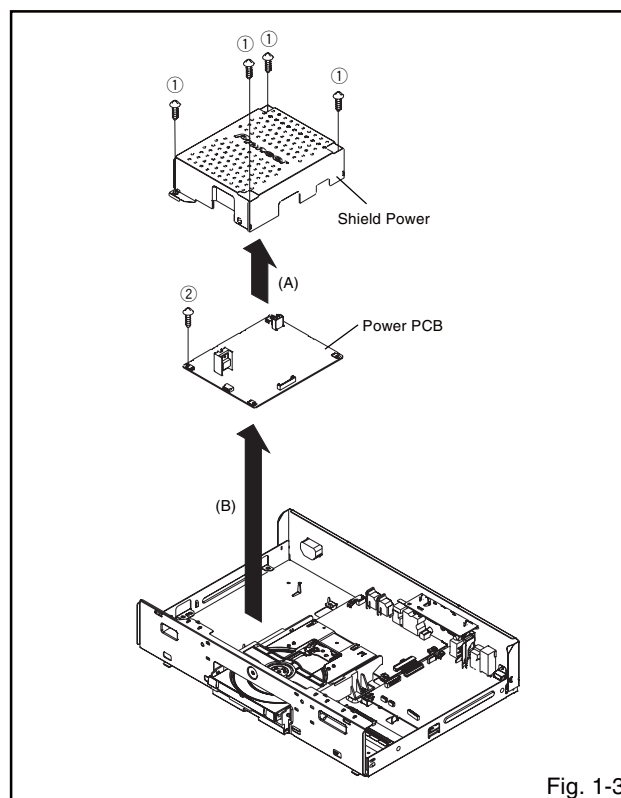
1-2: FRONT CABINET/OPERATION/OPERATION 2/ OPERATION 3 PCB (Refer to Fig. 1-2)

1. Remove the 2 screws ①.
2. Unlock the 5 supports ②.
3. Remove the Front Cabinet in the direction of arrow (A).
4. Disconnect the following connectors: (CP505, CP602, CP606 and CP3001).
5. Remove the 10 screws ③.
6. Remove the Operation/Operation 2/Operation 3 PCB in the direction of arrow (B).



1-3: POWER PCB (Refer to Fig. 1-3)

1. Disconnect the following connectors: (CP501, CP502 and CP7002).
2. Remove the 4 screws ①.
3. Remove the Shield Power in the direction of arrow (A).
4. Remove the screw ②.
5. Remove the Power PCB in the direction of arrow (B).



1-4: DVD DECK (Refer to Fig. 1-4)

1. Short circuit the position shown in **Fig. 1-4** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Disconnect the following connectors: **(CP2301, CP2302 and CP2303)**.
3. Remove the 4 screws ①.
4. Remove the DVD Deck in the direction of arrow.

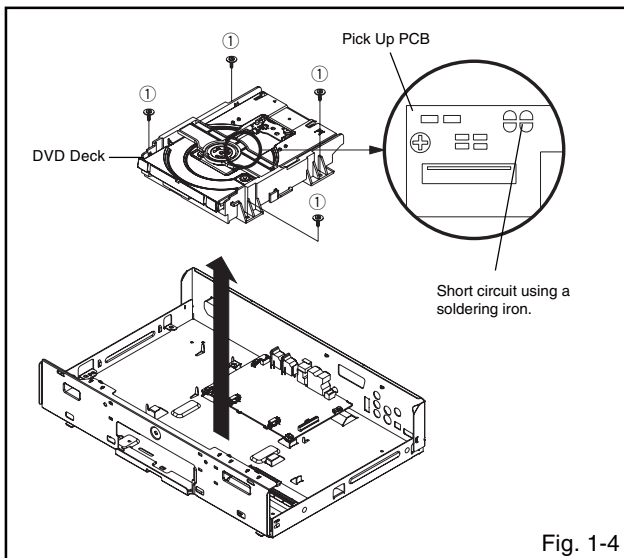


Fig. 1-4

1-5: REAR JACK PCB/DVD MT PCB (Refer to Fig. 1-5)

1. Disconnect the following connectors: **(CP8001 and CP8002)**.
2. Remove the 3 screws ①.
3. Remove the Rear Jack PCB in the direction of arrow (A).
4. Disconnect the following connector: **(CP7001)**.
5. Remove the 4 screws ②.
6. Remove the 4 screws ③.
7. Remove the DVD MT PCB in the direction of arrow (B).

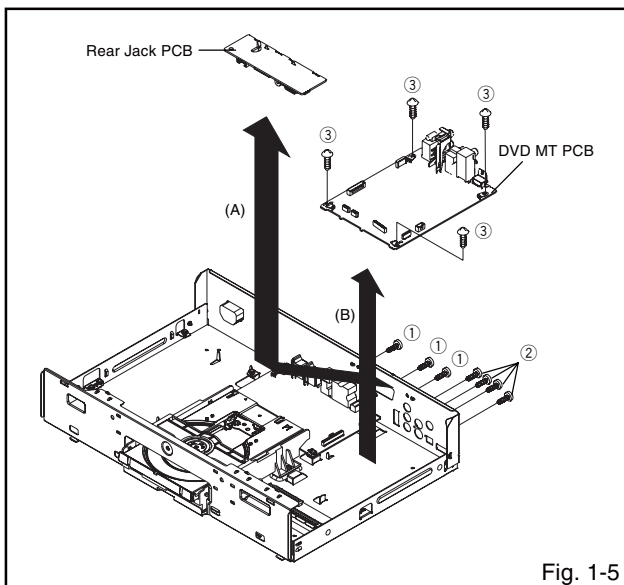


Fig. 1-5

NOTE

1. Before your operation, please read "PREPARATION OF SERVICING".
2. Use the Lead Free solder.
3. Manual soldering conditions
 - Soldering temperature: $320 \pm 20^\circ\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

1-6: AUDIO PCB (Refer to Fig. 1-6)

1. Remove the 4 screws ①.
2. Remove the 4 screws ②.
3. Remove the Audio PCB in the direction of arrow.

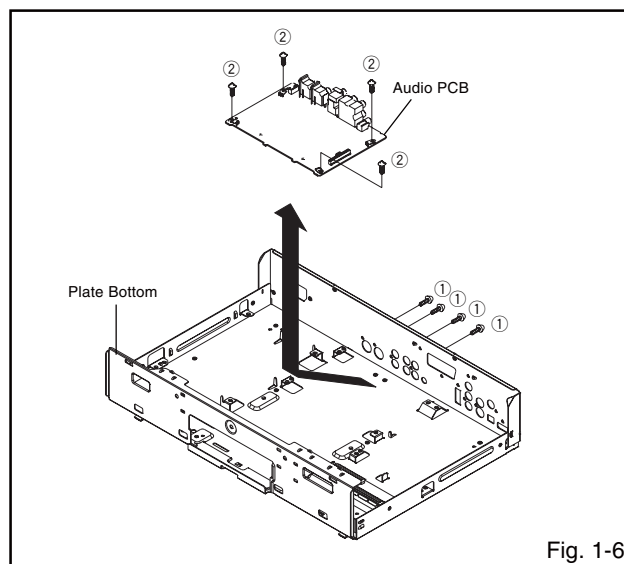


Fig. 1-6

2. REMOVAL OF DVD DECK PARTS

A NOTE

1. Disassemble only the DVD DECK PARTS parts listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

2-1: TRAY (Refer to Fig. 2-1-A)

1. Set the Tray opened. (Refer to the DISC REMOVAL METHOD AT NO POWER SUPPLY)
2. Unlock the 2 supports ① and draw it while sagging the Tray.

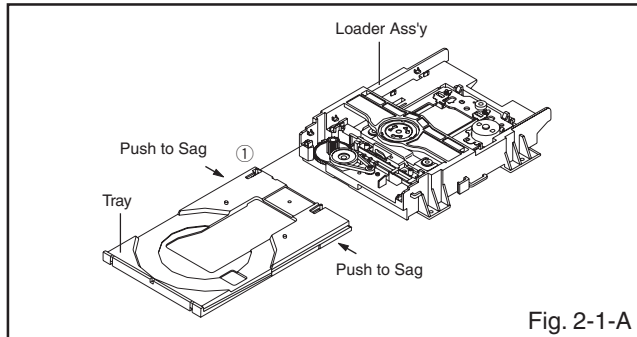


Fig. 2-1-A

C NOTE

1. In case of the Tray installation, install them as the circled section of Fig. 2-1-B so that the each markers are met.

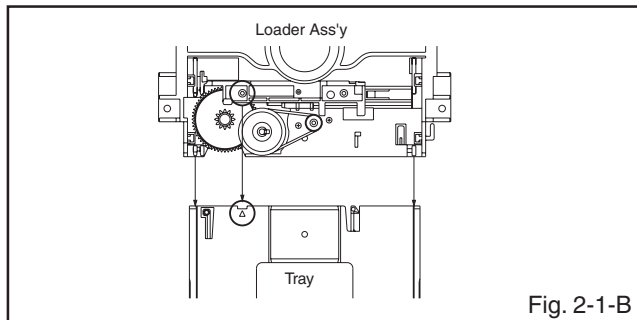


Fig. 2-1-B

2-2: TRAVERSE ASS'Y (Refer to Fig. 2-2-A)

1. Remove the screw ①.
2. Unlock the 2 supports ②.
3. Remove the Insulator (R) from the Loader Sub Ass'y.
4. Remove the Traverse Ass'y.

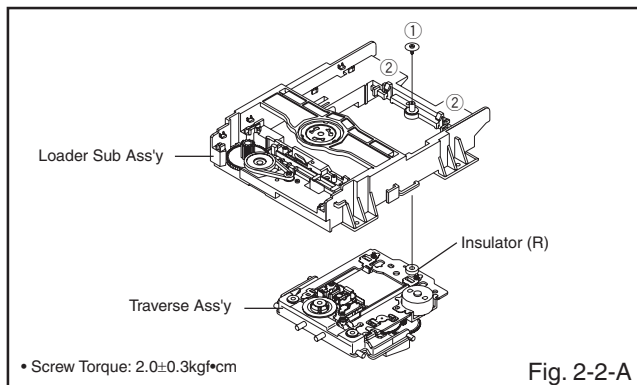


Fig. 2-2-A

NOTE

1. In case of the Traverse Ass'y, install it from (1) to (4) in order. (Refer to Fig. 2-2-B)
2. In case of the Traverse Ass'y installation, hook the wire on the Loader Ass'y as shown Fig. 2-2-C.

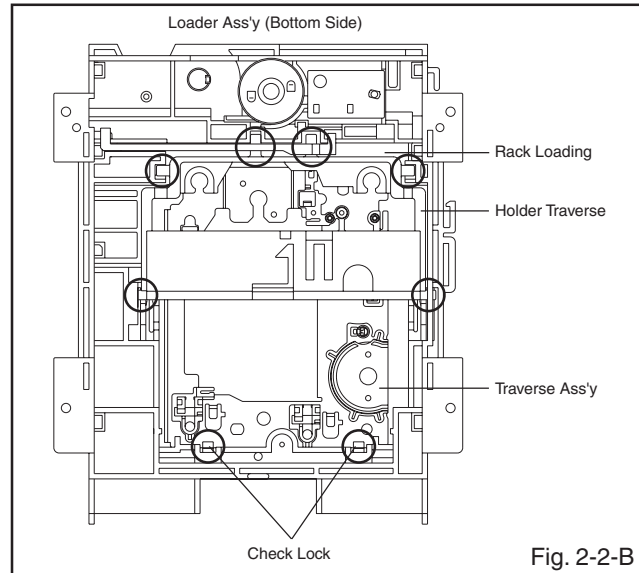


Fig. 2-2-B

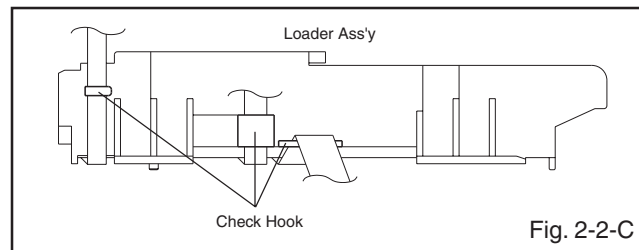


Fig. 2-2-C

2-3: LOADING MOTOR PCB ASS'Y/ LOADING BELT (Refer to Fig. 2-3-A)

1. Remove the Loading Belt.
2. Remove the screw ①.
3. Remove the Loading Motor PCB Ass'y.
4. Remove the 2 screws ②.
5. Remove the Loading Motor.
6. Remove the Gear Pulley.

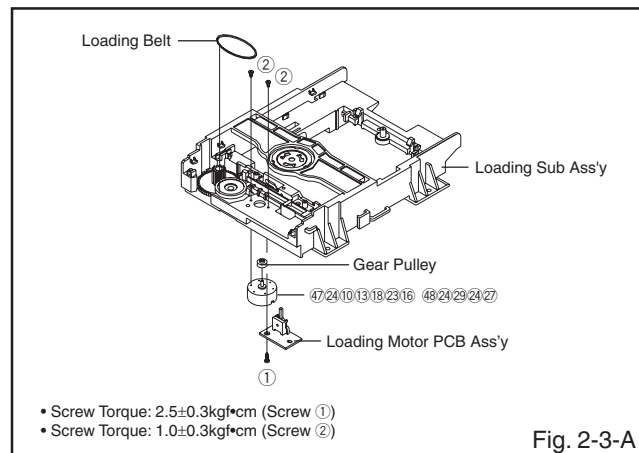


Fig. 2-3-A

NOTE

1. In case of the Pulley Motor installation, check if the value of the Fig. 2-3-B is correct.
2. When installing the wire of the Loading Motor PCB Ass'y, install it correctly as Fig. 2-3-C.
Manual soldering conditions
 - Soldering temperature: $320 \pm 20^{\circ}\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
3. When installing the Loading Motor PCB Ass'y, install it correctly as Fig. 2-3-D.
4. In case of the Loading Motor PCB Ass'y installation, hook the wire on the Loader Sub Ass'y as shown Fig. 2-3-E.

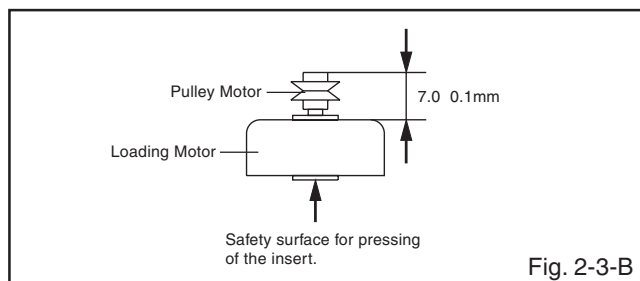


Fig. 2-3-B

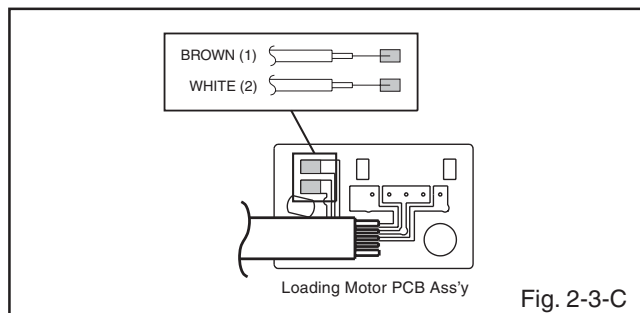


Fig. 2-3-C

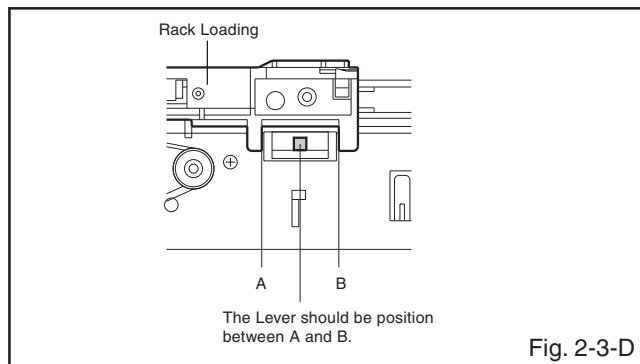


Fig. 2-3-D

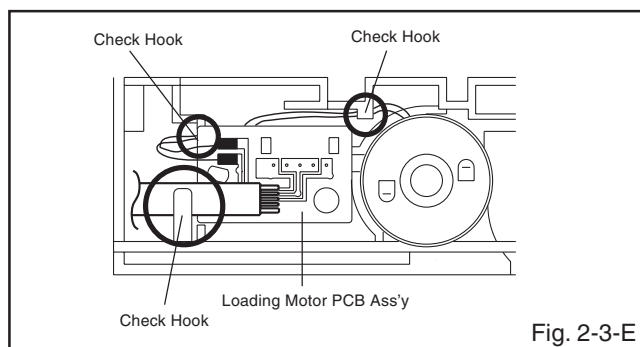


Fig. 2-3-E

2-4: RACK LOADING/MAIN GEAR/PULLEY GEAR (Refer to Fig. 2-4-A)

1. Unlock the support ② and remove the Gear Pulley.
2. Remove the Gear Main.
3. Press down the catcher ① and slide the Rack Loading.

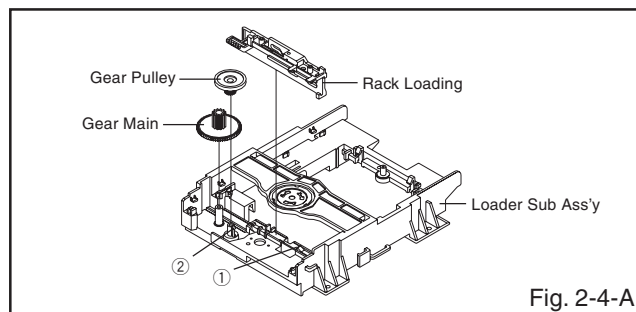


Fig. 2-4-A

NOTE

1. In case of the Rack Loading installation, hook the Rack Loading on the Loader Sub Ass'y as shown Fig. 2-4-B.
2. When installing the Gear Main, take care the direction of up or down as shown Fig. 2-4-C.

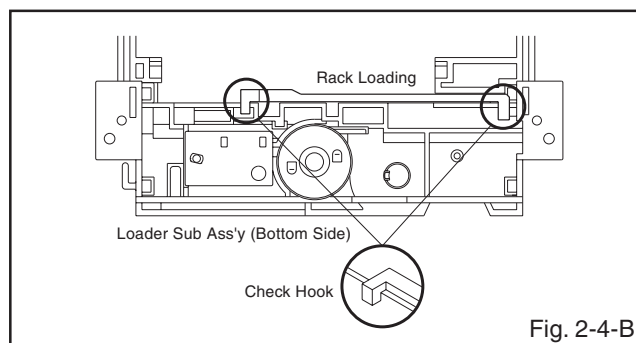


Fig. 2-4-B

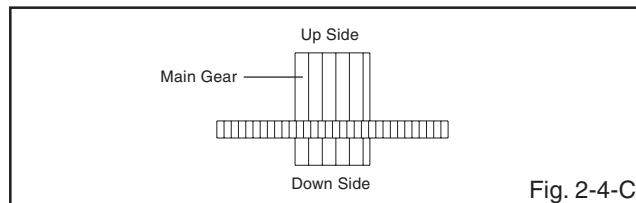


Fig. 2-4-C

2-5: CLAMPER ASS'Y (Refer to Fig. 2-5-A)

1. Press the Clamper and rotate the Plate Clamper clockwise, then unlock the 3 supports ①.
2. Remove the Plate Clamper, Magnet Clamper and Clamper.

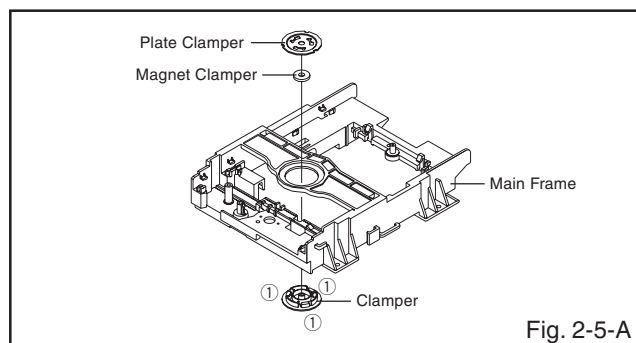


Fig. 2-5-A

NOTE

- A 1. In case of the Clamper Ass'y installation, install correctly as Fig. 2-5-B.

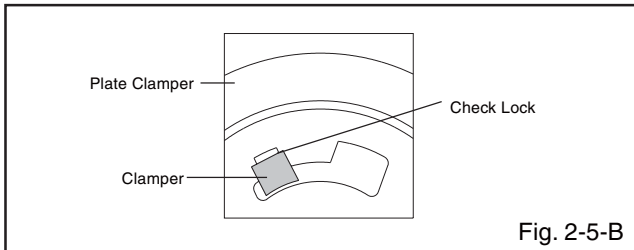


Fig. 2-5-B

B **2-6: HOLDER TRAVERSE/INSULATOR (F)/INSULATOR (R) (Refer to Fig. 2-6-A)**

1. Remove the Holder Traverse.
2. Remove the 2 Insulator (F).
3. Remove the Insulator (R).



Pickup lenses
GEM1004
GED-008

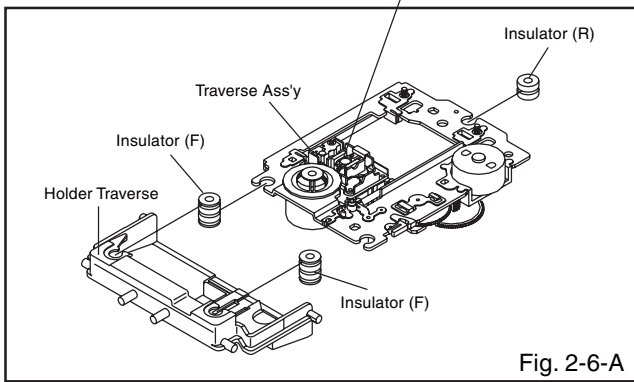


Fig. 2-6-A

NOTE

- C 1. In case of the Insulator (F) installation, install correctly as Fig. 2-6-B.

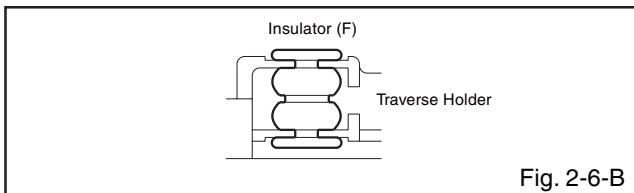


Fig. 2-6-B

D **2-7: SWITCH PCB ASS'Y/GEAR MIDDLE/GEAR FEED/ RACK FEED ASS'Y/FEED MOTOR (Refer to Fig. 2-7-A)**

1. Unlock the support ①.
2. Remove the Gear Middle.
3. Remove the screw ②.
4. Remove the Rack Feed Ass'y.
5. Remove the screw ③.
6. Remove the Switch PCB Ass'y.
7. Remove the screw ④.
8. Remove the Gear Feed.
9. Remove the 2 screws ⑤.
10. Remove the Feed Motor.
11. Remove the Gear Motor.

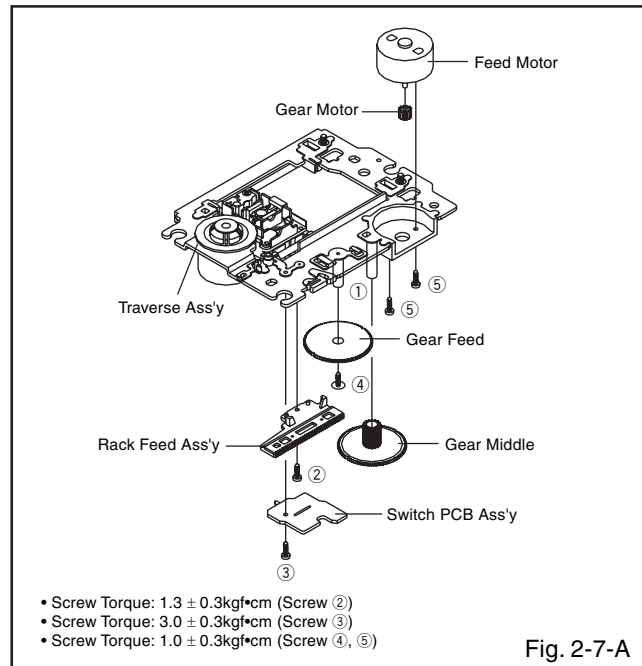


Fig. 2-7-A

NOTE

1. When installing the Rack Feed Ass'y, push both ends to align the teeth as shown Fig. 2-7-B. Then install it.
2. In case of the Gear Motor installation, check if the value of the Fig. 2-7-C is correct.
3. When installing the wire of the Switch PCB Ass'y, install it correctly as Fig. 2-7-D.
Manual soldering conditions
 - Soldering temperature: $320 \pm 20^\circ\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
4. After the assembly of the Traverse Ass'y, hook the wire on the Traverse Ass'y as shown Fig. 2-7-E.

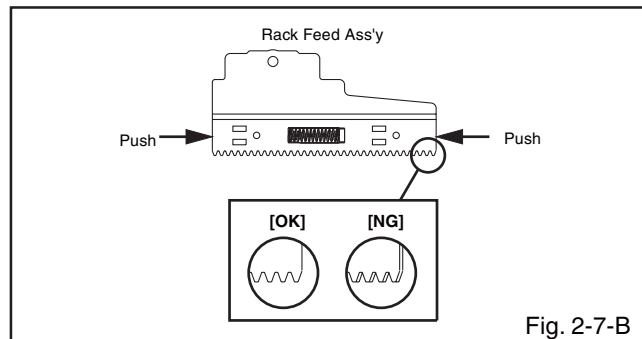


Fig. 2-7-B

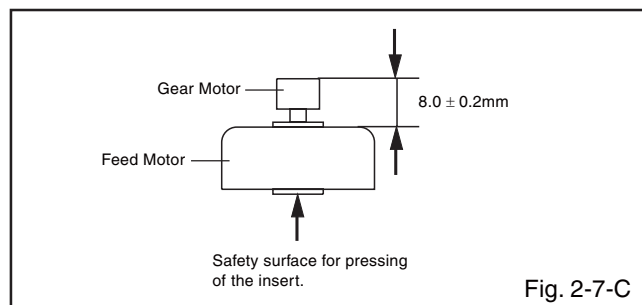
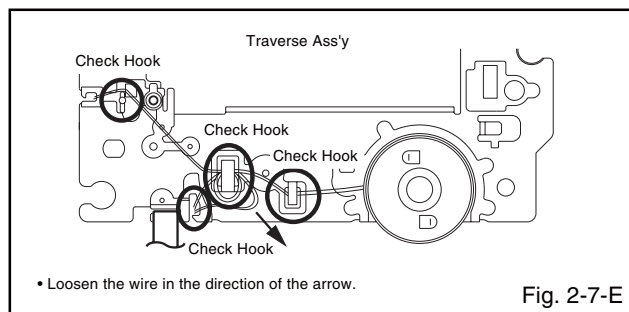
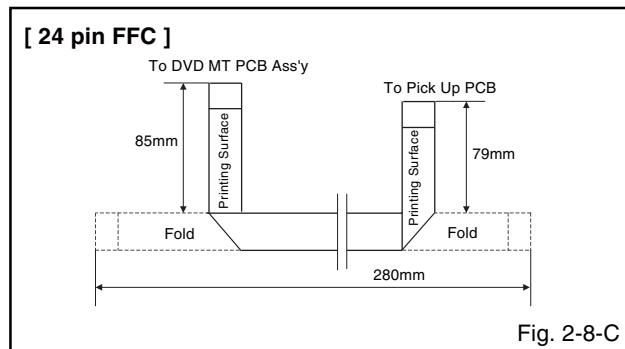
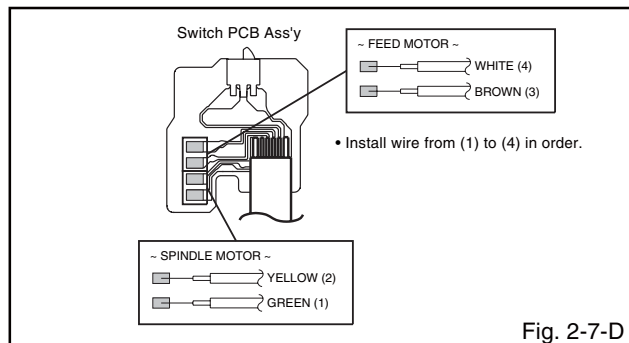


Fig. 2-7-C

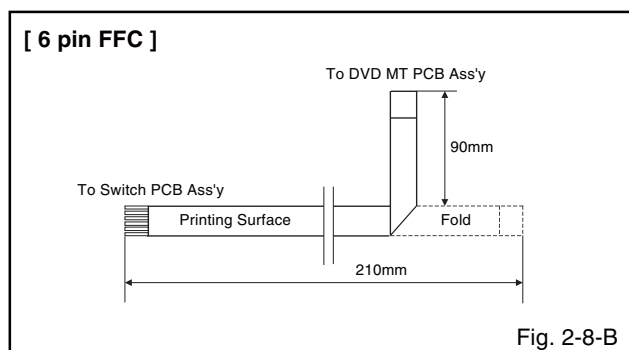
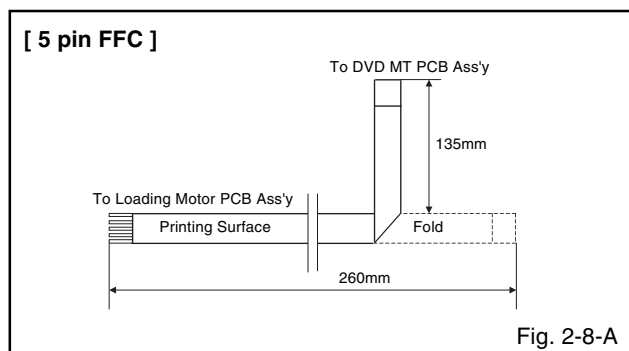


2-8: FFC WIRE HANDLING

- When installing the FFC, fold it correctly and install it as shown from Fig. 2-8-A to Fig. 2-8-C.

NOTE

- Do not make the folding lines except the specified positions for the FFC.



8. EACH SETTING AND ADJUSTMENT

8.1 ADJUSTMENT

A There is no information to be shown in this chapter.

8.2 RE-WRITE FOR FIRMWARE

1. Purpose

- After replacing the DVD MT PCB Assy, be sure to update the firmware to the latest version. The firmware of the Assy for service may not be the latest.
- The "DVD MT PCB ASSY" of this model includes two types of firmware for main processor and sub processor, and therefore it is necessary to update each firmware.
- When creating firmware update disc, two discs of CD-R/CD-RW need to be prepared and each firmware needs to be separately burned into each disc.
- B And when updating both types of firmware, update the firmware for sub processor, and then update the firmware for main processor.
- * Both types of firmware cannot be updated simultaneously.
 - * It is not necessary to update the firmware if the latest firmware versions are already stored in "DVD MT PCB ASSY". If either one of the two is the previous version, only the previous version needs to be updated.
 - * The disc creation procedure and update procedure are the same for both types of firmware.

2. Procedures for creating the disc for updating

Necessary tools:

- ① PC with a CD-R/CD-RW drive
- ② Blank CD-R or CD-RW
- ③ Firmware file (****.BIN)

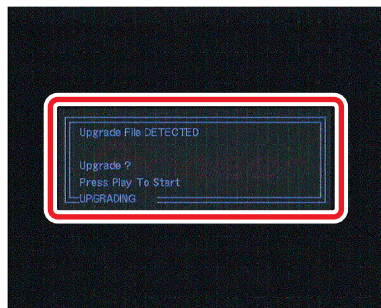
How to create:

- ① Start up the program for writing to CD.
- ② Load a blank disc in the CD-R/CD-RW drive.
- ③ Enter "PIONEER" as the volume label.
- ④ Select the .BIN file.
- ⑤ Write the latest version of the firmware in ISO 9660 format.

3. Procedures for updating the firmware

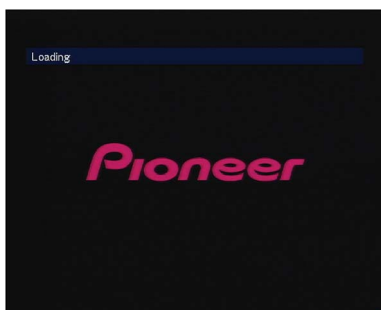
How to update:

- ① Turn on the main unit and open the disc tray.
- ② Place the disc for updating in the disc tray and close the tray.
- ③ Press the PLAY button.



While the screen shown at left is being displayed, updating is in progress.
DO NOT TURN OFF THE POWER DURING UPDATING.

- ④ Updating of the firmware is completed.



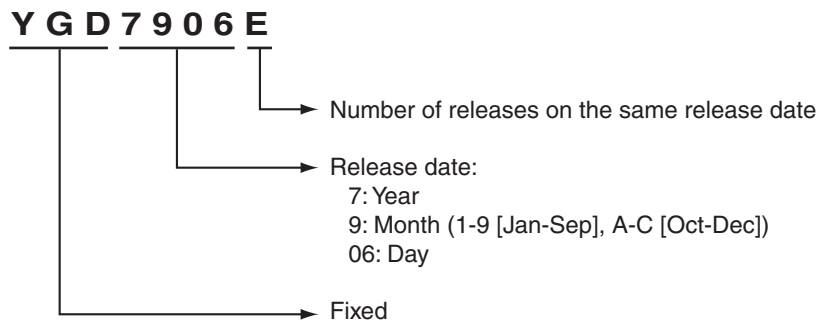
When the screen with the Pioneer logo is displayed, updating is completed.
The time required for updating is about 2 minutes.

4. How to confirm the version of the firmware

Press the ESC then the CHAP key on the remote control unit for servicing. The version of the firmware is labeled ROM NUMBER and Subcon. Check if the version is the latest one.

	AREA:WY	REGION:2
<u>ROM NUMBER</u>	<u>YGD7906E</u>	
<u>Subcon</u>	<u>0.34</u>	
REG CHK	00	
SUM CHK	054C	
FL VERSION	1.16	
CHIP VERSION	1389EE	

How to interpret the version code:



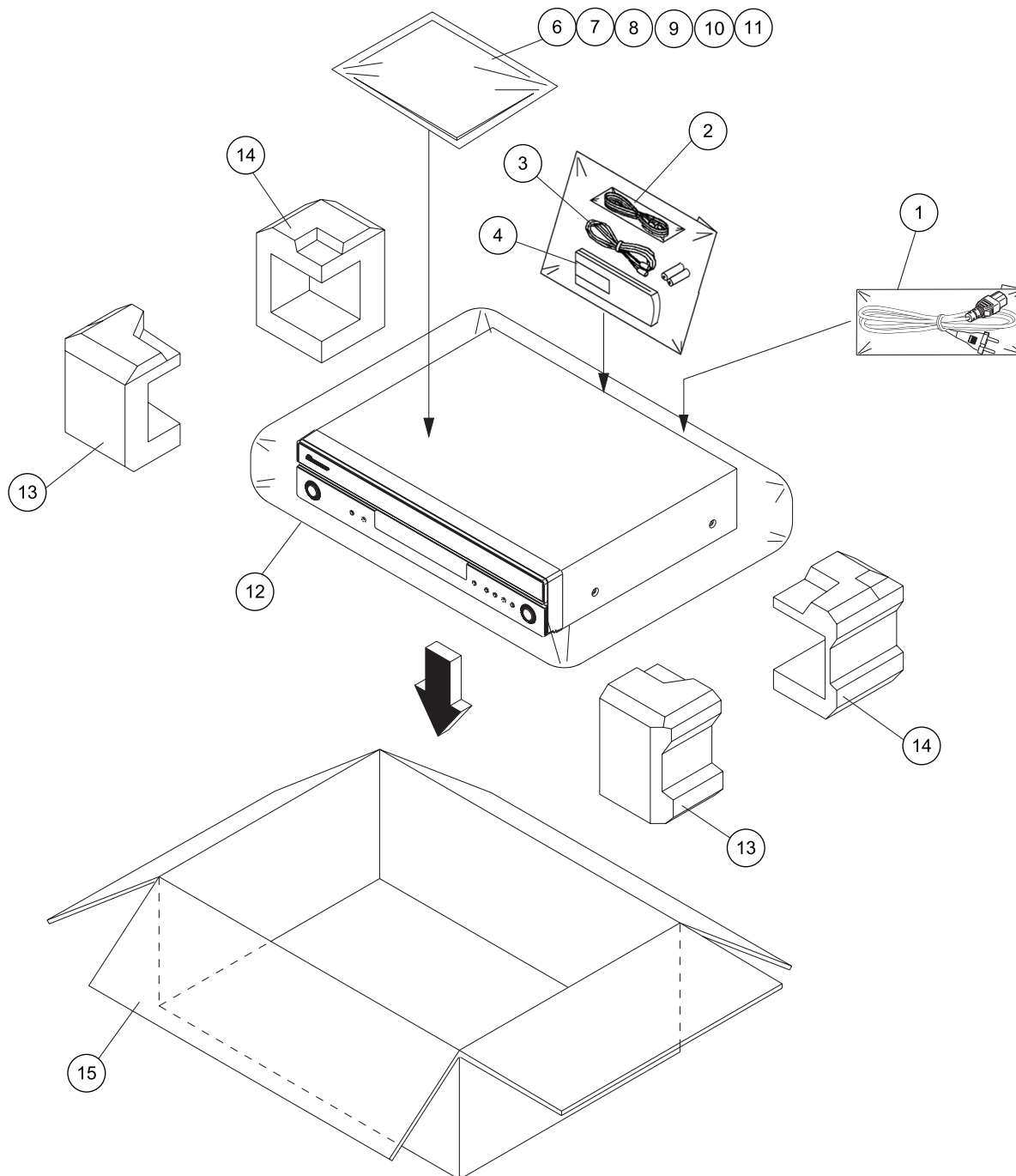
5. Troubleshooting

- ① If updating of the firmware failed
If the main unit was turned off during updating, it cannot initialize and start up again properly. In such a case, replace the flash ROM on the DVD MT PCB Assy.
- ② If updating of the firmware using the disc for updating failed
 - Was the disc for updating recognized properly?
Check if the volume label of the disc is PIONEER.
 - Is playback of a disc other than the disc for updating possible?
If playback of a test CD is also impossible, a reading section, such as PU, may be defective. In such a case, repair the defective part first.
If playback of a test CD is possible, the disc for updating may be defective. Check for any scratches or foreign matter, such as fingerprints, on the reading surface.
If no problem is found with the disc, create a new disc for updating again.

9. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
● Screws adjacent to ▼ mark on product are used for disassembly.
● For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING SECTION



(1)PACKING SECTION parts List

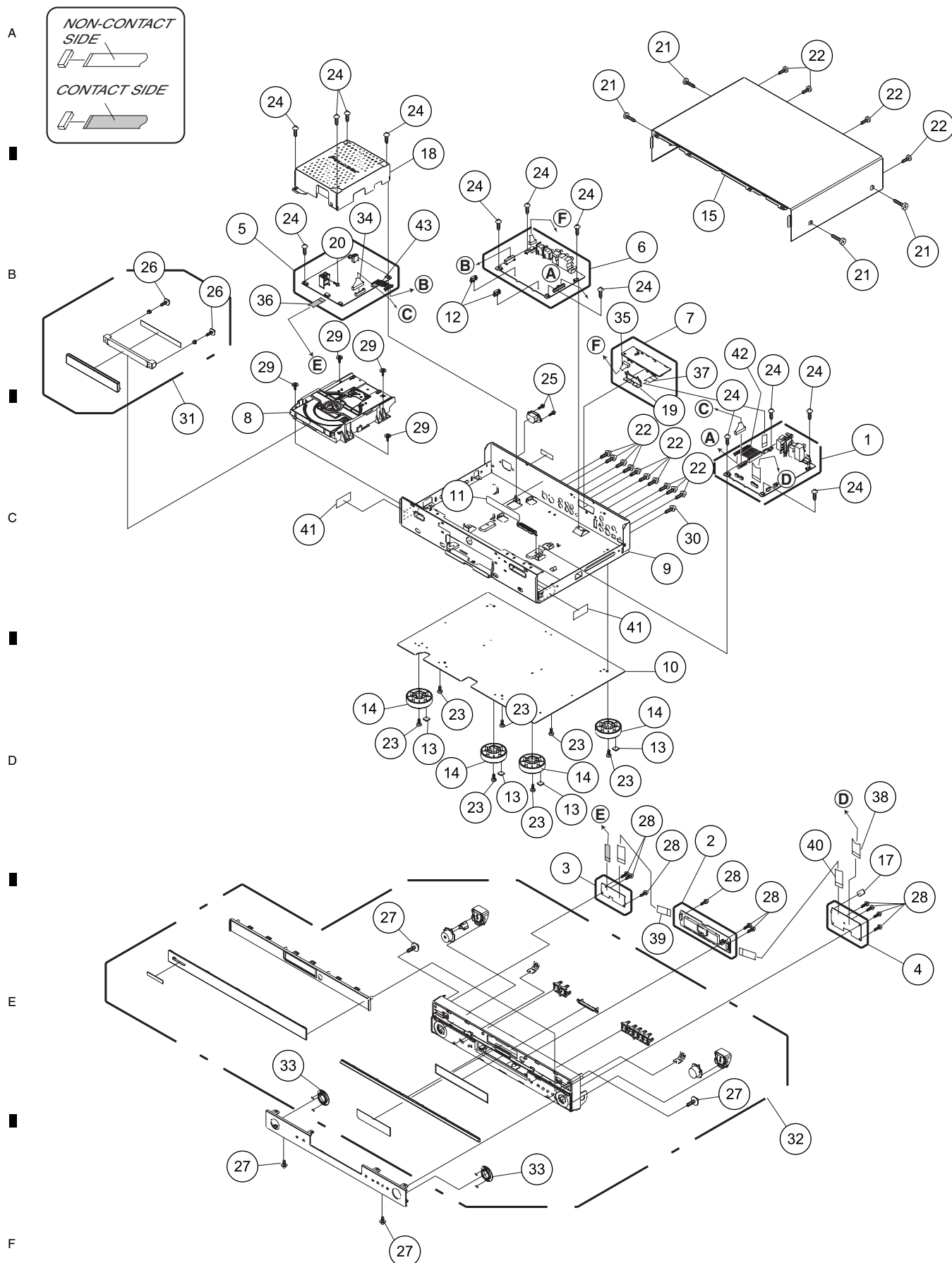
Mark No.	Description	Part No.	Mark No.	Description	Part No.
⚠ 1	Power Cable	120S155806		(Dutch/Spanish)	
2	AudioCable	06CPBA2008	10	Operating Instructions	See Contrast table (2)
3	Video Cable	06CPBA2005		(Russian)	
4	Remote Control	07650PG021			
5	•••••		11	Polyethylene Bag,Instruction	See Contrast table (2)
			12	Lightron Sheet	791WHA0151
NSP 6	Warranty Card	J2K80202A	13	Package, Front	792WHA0740
7	Operating Instructions (English/Italian)	See Contrast table (2)	14	Package, Back	792WHA0741
8	Operating Instructions (French/German)	See Contrast table (2)	15	Gift Box	See Contrast table (2)
9	Operating Instructions	See Contrast table (2)			

(2) CONTRAST TABLE

DV-LX50/WYXZT5 and DV-LX50/WYXZTUR5 are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-LX50/WYXZT5	DV-LX50/WYXZTUR5
	7	Operating Instructions (English/Italian)	J2K80221A	Not used
	8	Operating Instructions (French/German)	J2K80222A	Not used
	9	Operating Instructions (Dutch/Spanish)	J2K80223A	Not used
	10	Operating Instructions (Russian)	Not used	J2K80701A
	11	Polyethylene Bag, Instruction	JB5KD400	JB5KD200
	15	Gift Box	793WCD1837	793WCDD617

9.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

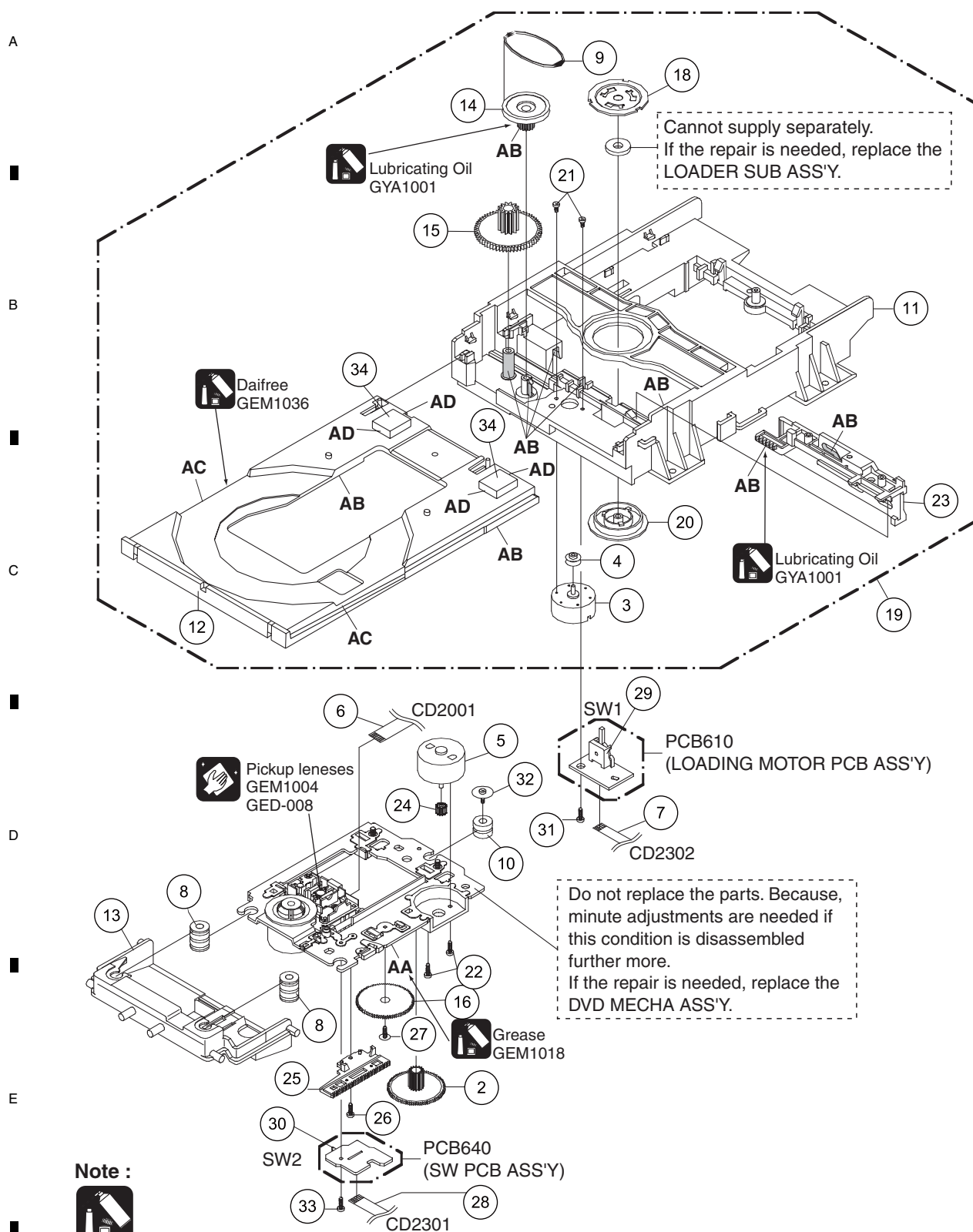
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	DVD MT PCB Assy	A2K802A130	23	Screw, Tap Tite(B) BIND (3x8)	810923080S
2	OPERATION 1 PCB Assy	A2K802A270	24	Screw, Tap Tite(B) BIND (3x8)	810923080U
3	OPERATION 2 PCB Assy	A2K802A280	25	Screw, Tap Tite(B) FLAT (3x8CU)	810933080L
4	OPERATION 3 PCB Assy	A2K802ADF0			
⚠ 5	POWER PCB Assy	A2K802A240	26	Screw, Tap Tite(P) WH10 (M2.6x8)	8110E2680S
			27	Screw, Tap Tite(P) BIND (2.6x8)	811022680S
6	AUDIO PCB ASSY	A2K802AF70	28	Screw, Tap Tite(P) BIND (2.6x8)	811022680U
7	REAR JACK PCB ASSY	A2K802A250	29	Screw, Tap Tite(S) -R WASHER8 (3x6.3CH)	816423063U
8	DVD MECHA ASSY	A2K802A650	30	Screw Pan	810213080L
NSP 9	Plate, Bottom	761WSD0003			
NSP 10	Plate Bottom Under	761WSB0069	31	Tray Assy	7A7110026A
			32	Front Cabi Assy	7A7010323A
NSP 11	Sheet, Caution	726000A140	33	Button Ring Assy	7A7370001A
12	Holder Wire	899RLMS2V0	34	Cord Connector (CD502)	06CU2B2502
13	Cushion, Leg	800SRA0002	35	Cord Connector (CD504)	06CU251601
14	Leg	704WPC0002			
15	Cabinet, Top	702WSB0138	36	Cord Jumper (CD506)	122H061301
			37	Cord Jumper (CD507)	122H081012
16	•••••		38	Cord Jumper (CD601)	122H0H1801
17	Sheet PC	724WNA0018	39	Cord Jumper (CD604)	122H0C0902
18	Shield Power	752WSB0001	40	Cord Jumper (CD605)	122H0E0803
19	Shield, 21Pin	761WSA0212			
20	Screw, Tap Tite (B) WH7 (3x10)	8109I30A0U	41	Acetate Tape	GYH1026
			42	Cord Connector (CP4002)	06CK7N0301
21	Screw, Tap Tite(B) PIBIND (3x6)	8109Q3060S	43	Cord Connector (CP503)	06CK790301
22	Screw, Tap Tite(B) BIND (3x8)	810923080L			

(2) CONTRAST TABLE

DV-LX50/WYXZT5 and DV-LX50/WYXZTUR5 are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-LX50/WYXZT5	DV-LX50/WYXZTUR5
	1	DVD MT PCB Assy	A2K802A130	A2K807A130
	9	Plate, Bottom	761WSD0003	761WSDA005

9.3 DVD MECHA SECTION



Note :



CLASS	PART NO.	MARK
GREASE	GEM1018	AA
	GYA1001	AB
	GEM1036	AC
Screw tight	GYL1001	AD

NOTE: Applying positions AA, AB and AC for the grease are displayed for this section. Check if the correct grease is applied for each position.

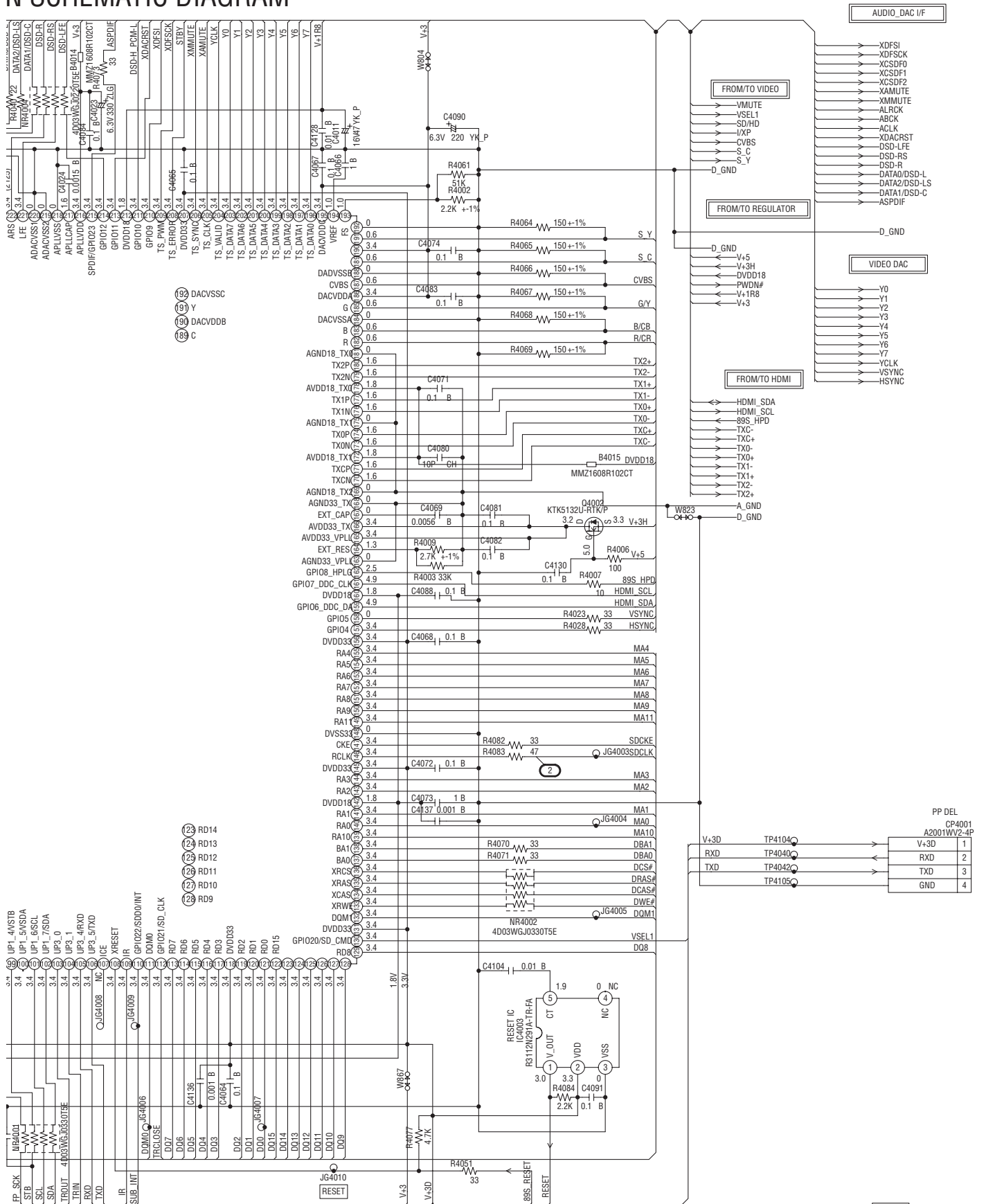
DVD MECHA SECTION parts List

Mark No.	Description	Part No.
1	••••••	
2	Gear,Middle	92P100117A
3	Loading Motor	1515S98004
4	Pulley,Motor	92P100097A
5	FEED Motor	1515S98004
6	Cord Jumper (CD2001)	12C14O2801
7	Cord Jumper (CD2302)	122H052601
8	Insulator (F)	92P200013A
9	Belt,Loading	92P200015A
10	Insulator (R)	92P200016A
11	Frame,main	92P100119A
12	Tray (R)	92P100151A
13	Holder ,Traverse	92P100125A
14	Gear,Pulley	92P100123A
15	Gear,Main	92P100124A
16	Gear,Feed	92P100116A
17	••••••	
18	Plate, Clamper	92P000023A
19	LOADER SUB ASSY (R)	92AAA0024A
20	Clamper	92P100122A
21	Screw,Pan (M1.7x3 P3)	814011730U
22	Screw,Pan (M1.7x2.3 P3)	814011723U
23	Rack,Loading	92P100121A
24	Gear,Motor	92P100088A
25	Feed Rack Assy	92AAA0017A
26	Screw,T-Tite(B) (M1.7x5.0 P3)	813381750U
27	Screw,Gear Feed	92P700007A
28	Cord Jumper (CD2301)	122H062102
29	Switch (SW1)	0515S32003
30	Push Switch (SW2)	0500101036
31	Screw,Tap Tite(P) (2.6x8)	811022680U
32	Sems.Tap Tite(P) (2x8)	816112080U
33	Screw (Bind 2x8)	811022080U
34	Cushion	800WF00072

4

N SCHEMATIC DIAGRAM

(DVD PCB)



IC DIAGRAM IS THE LATEST AT THE TIME
AND SUBJECT TO CHANGE WITHOUT NOTICE.

PCB130
DMG094

DV-LX50

•

F



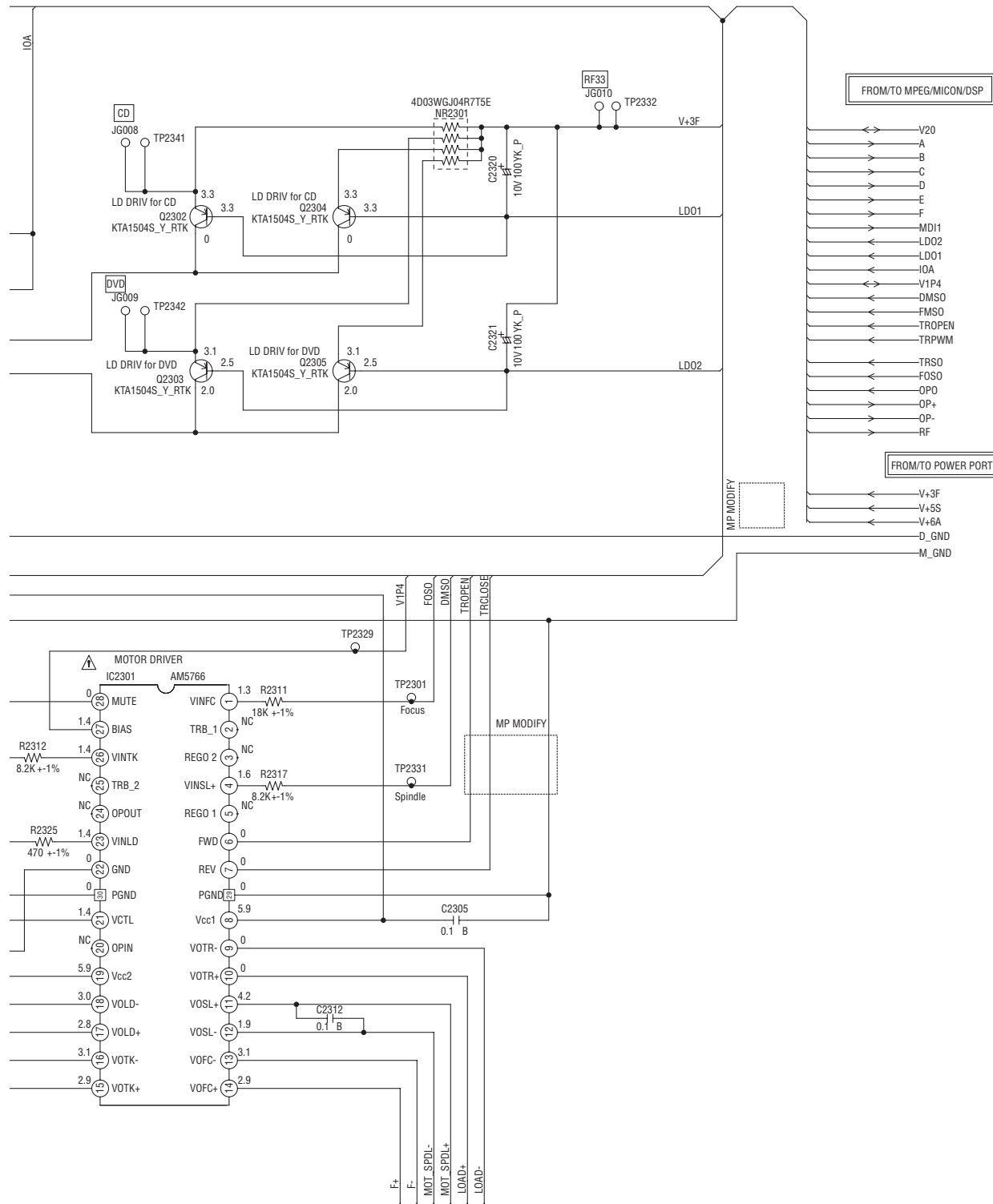
4

A



C

DR DRV SCHEMATIC DIAGRAM (DVD PCB)



ACH PART WAS
THE DIGITAL TESTER
C.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

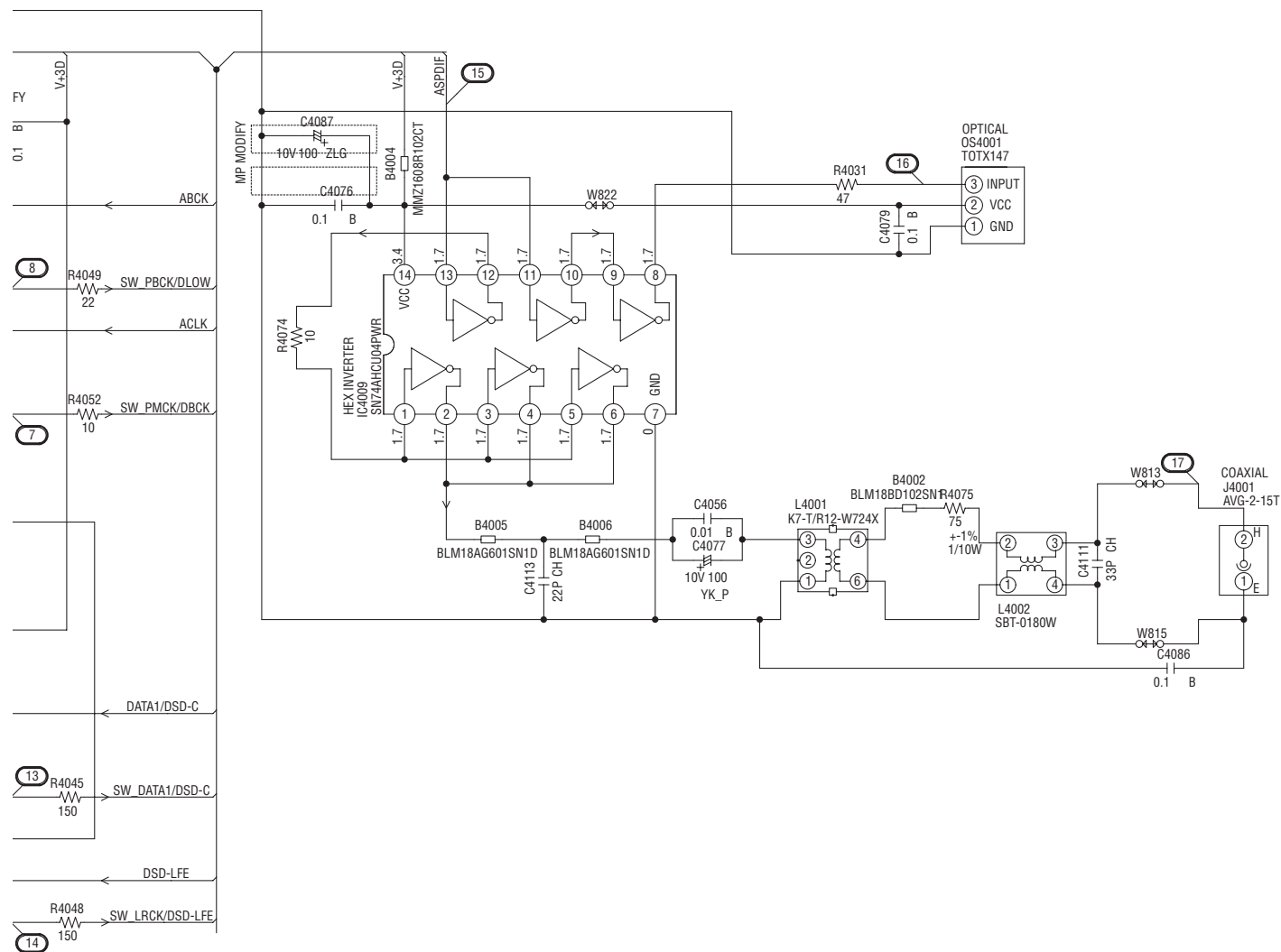
CAUTION: DIGITAL TRANSISTOR



PCB130
DMG094

4

SCHEMATIC DIAGRAM (DVD PCB)



CAUTION: DIGITAL TRANSISTOR



THIS DIAGRAM IS THE LATEST AT THE TIME
AND SUBJECT TO CHANGE WITHOUT NOTICE.

PCB130
DMG094

△

A



64

A



FROM/TO VIDEO

—ADV Y/G

—ADV PB/

—ADV PR/

—GND

C

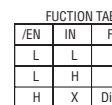
□

F

1

PCB130
DMG094

VIDEO DRIVER SCHEMA (DVD PCB)



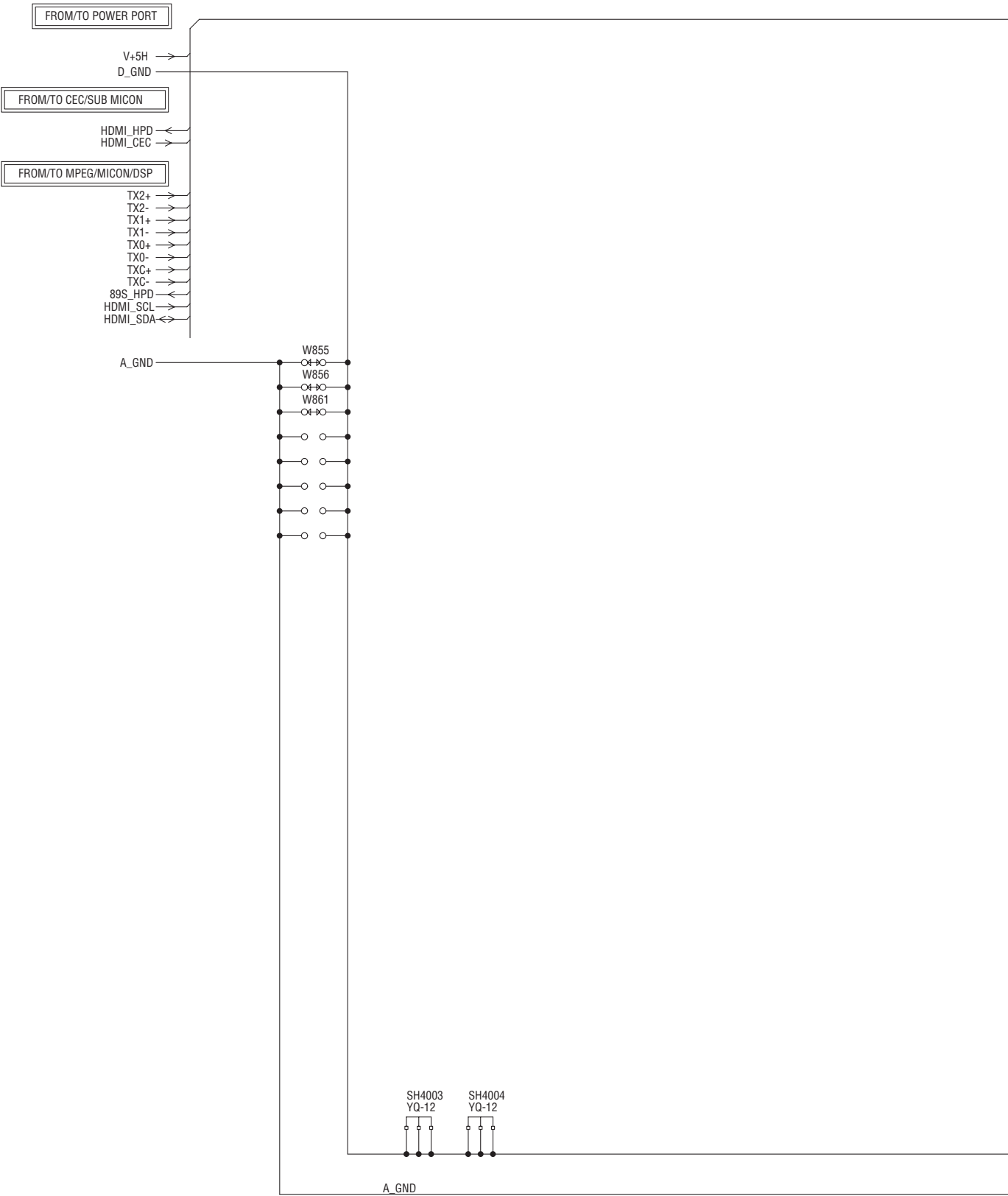
A

PCB130
DMG094

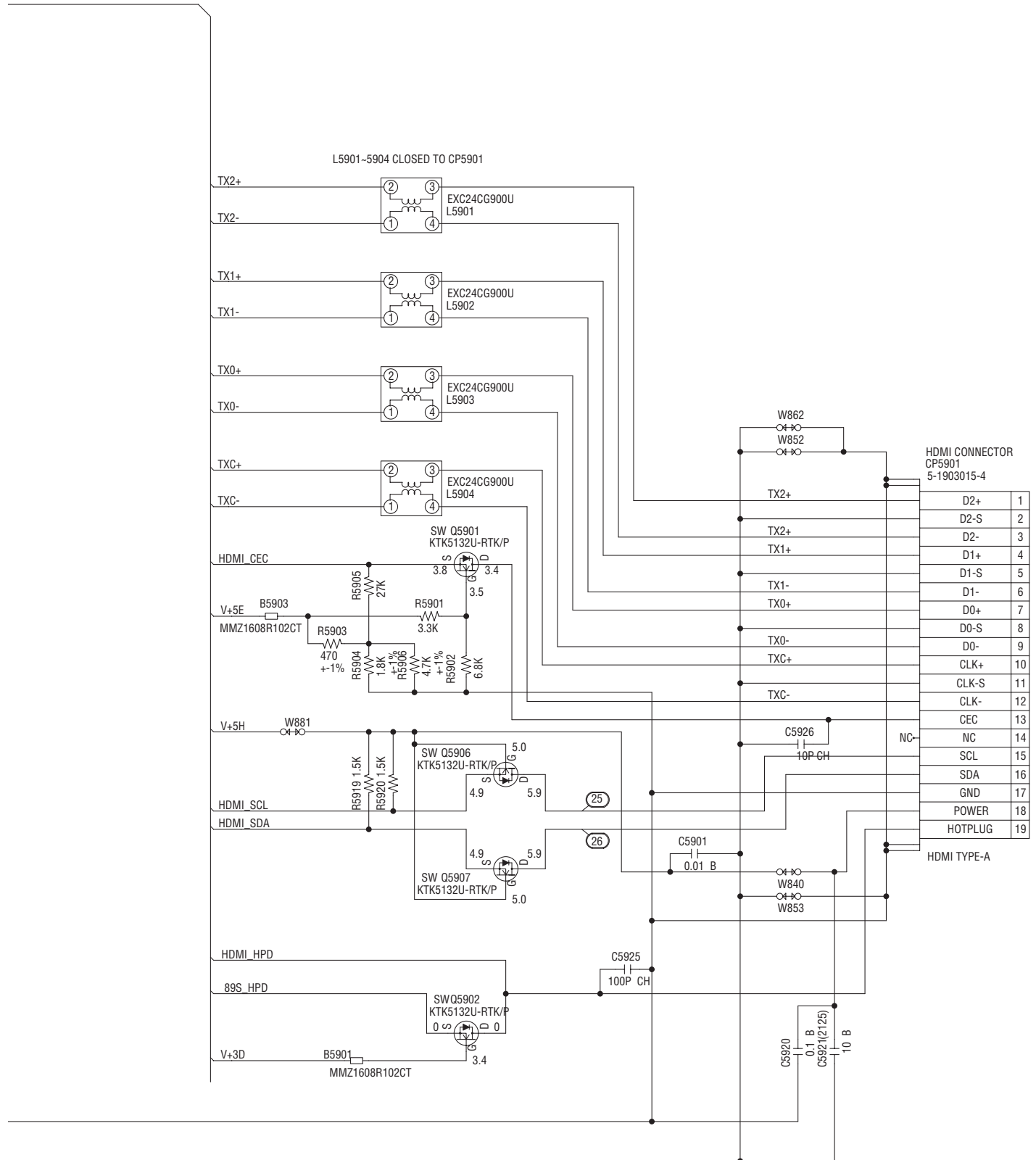
10.7 DVD MT PCB ASSY (7/9)

DVD MT PCB ASSY (7/9)
(WYXZT5:A2K802A130)
(WYXZTUR5:A2K807A130)

HDMI SCHEMATIC
(DVD PCB)



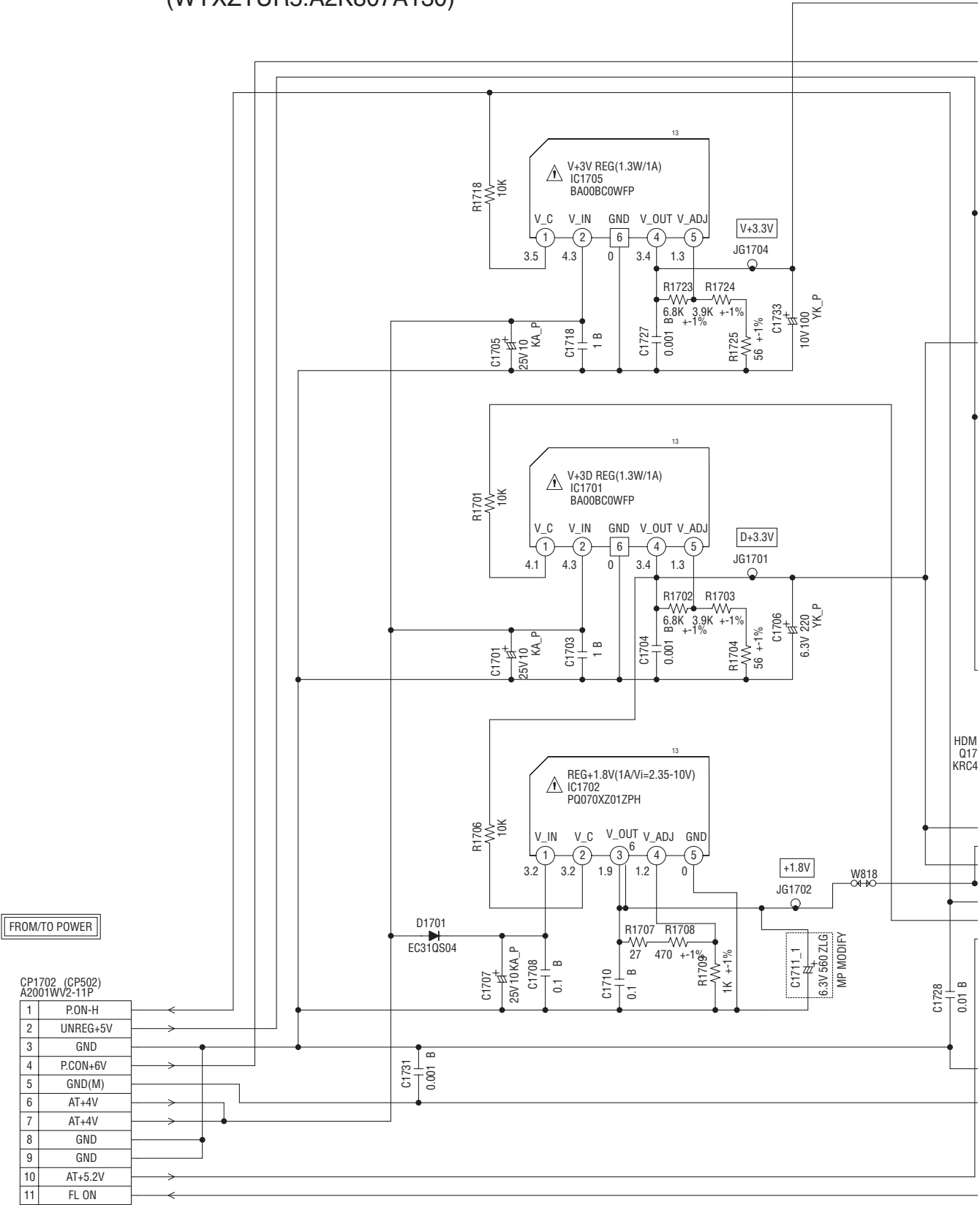
EMATIC DIAGRAM (DVD PCB)



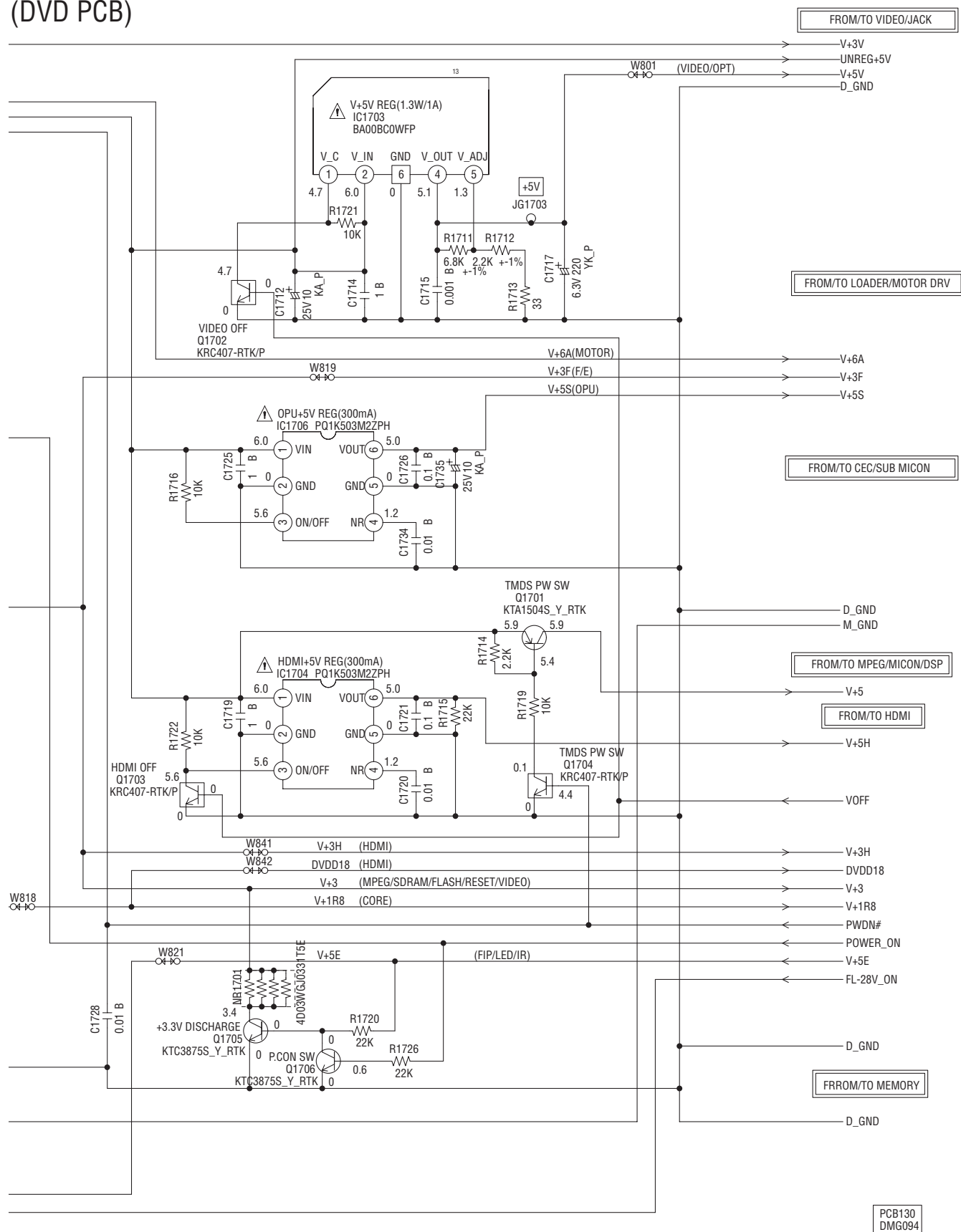
10.9 DVD MT PCB ASSY (9/9)

REGULATOR SCHEMA (DVD PCB)

DVD MT PCB ASSY (9/9)
(WYXZT5:A2K802A130)
(WYXZTUR5:A2K807A130)



SCHEMATIC DIAGRAM (DVD PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

PCB130
DMG094

4

FL/FR SCHEMATIC I



A



□

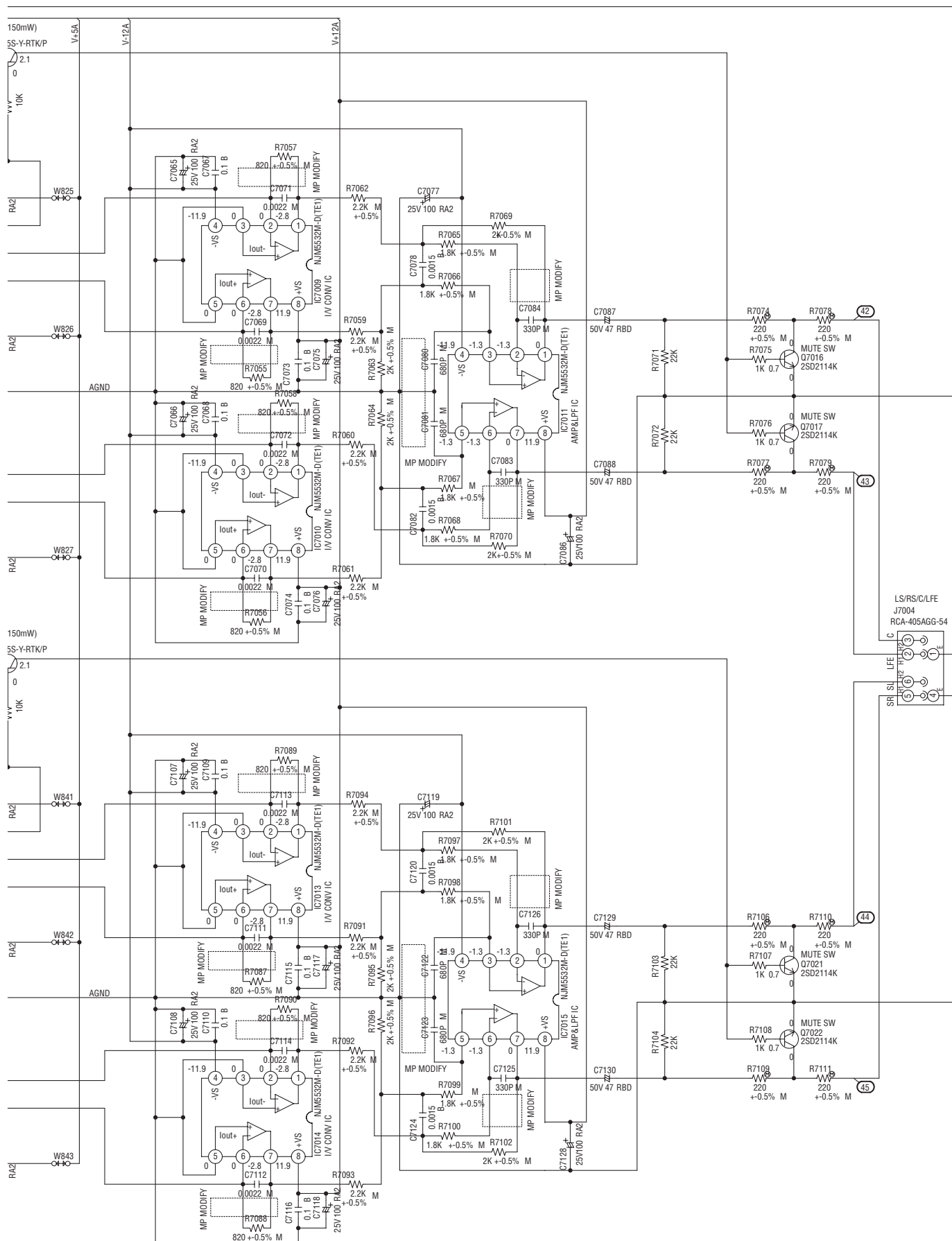
E

1

SURROUND SCHEMATIC



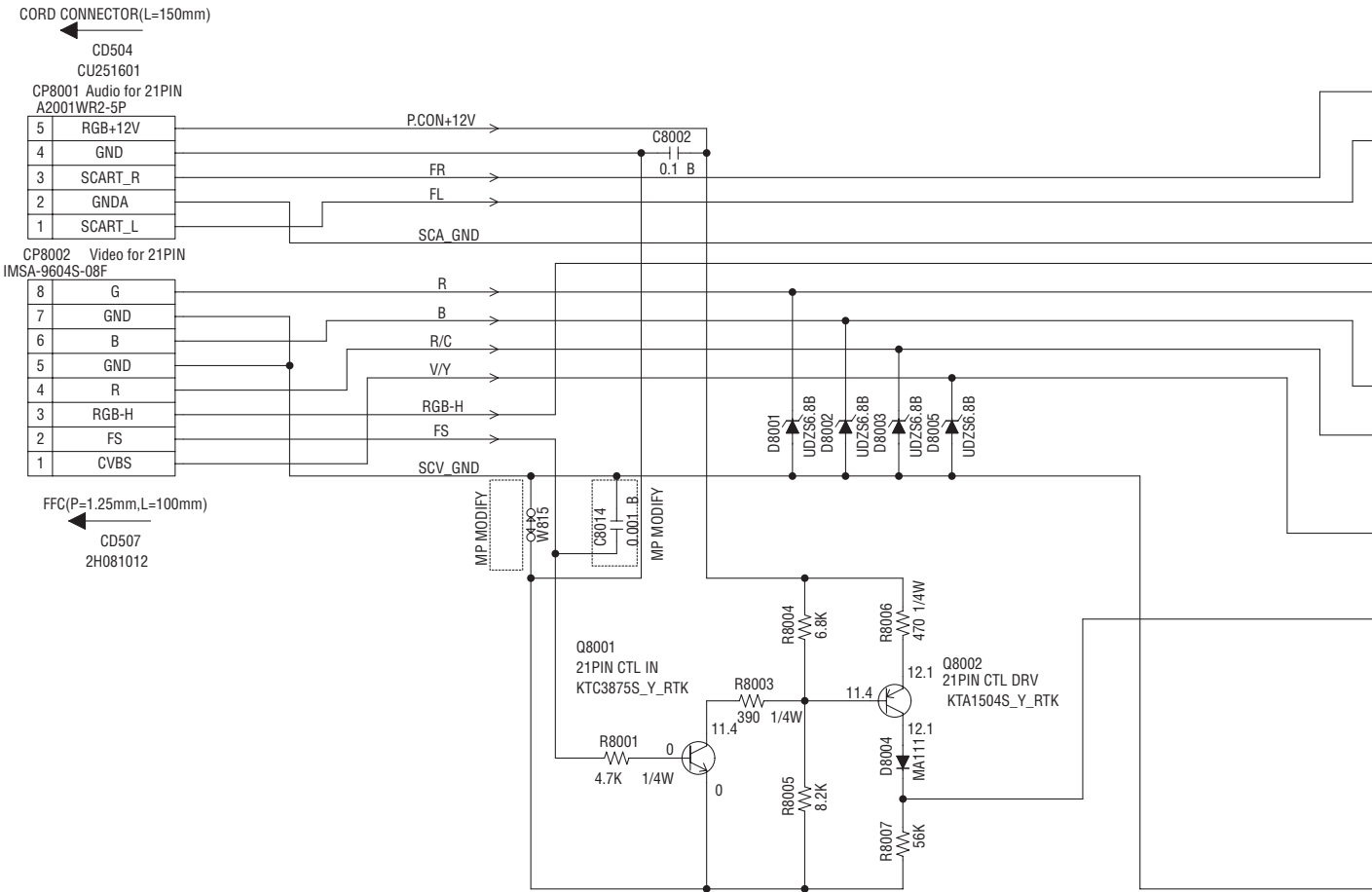
(AUDIO PCB)



10.12 REAR JACK PCB ASSY

REAR JACK PCB ASSY
(A2K802A250)

SCART SCHEMATIC
(SCART PCB



CAUTION: DIGITAL TRANSISTOR

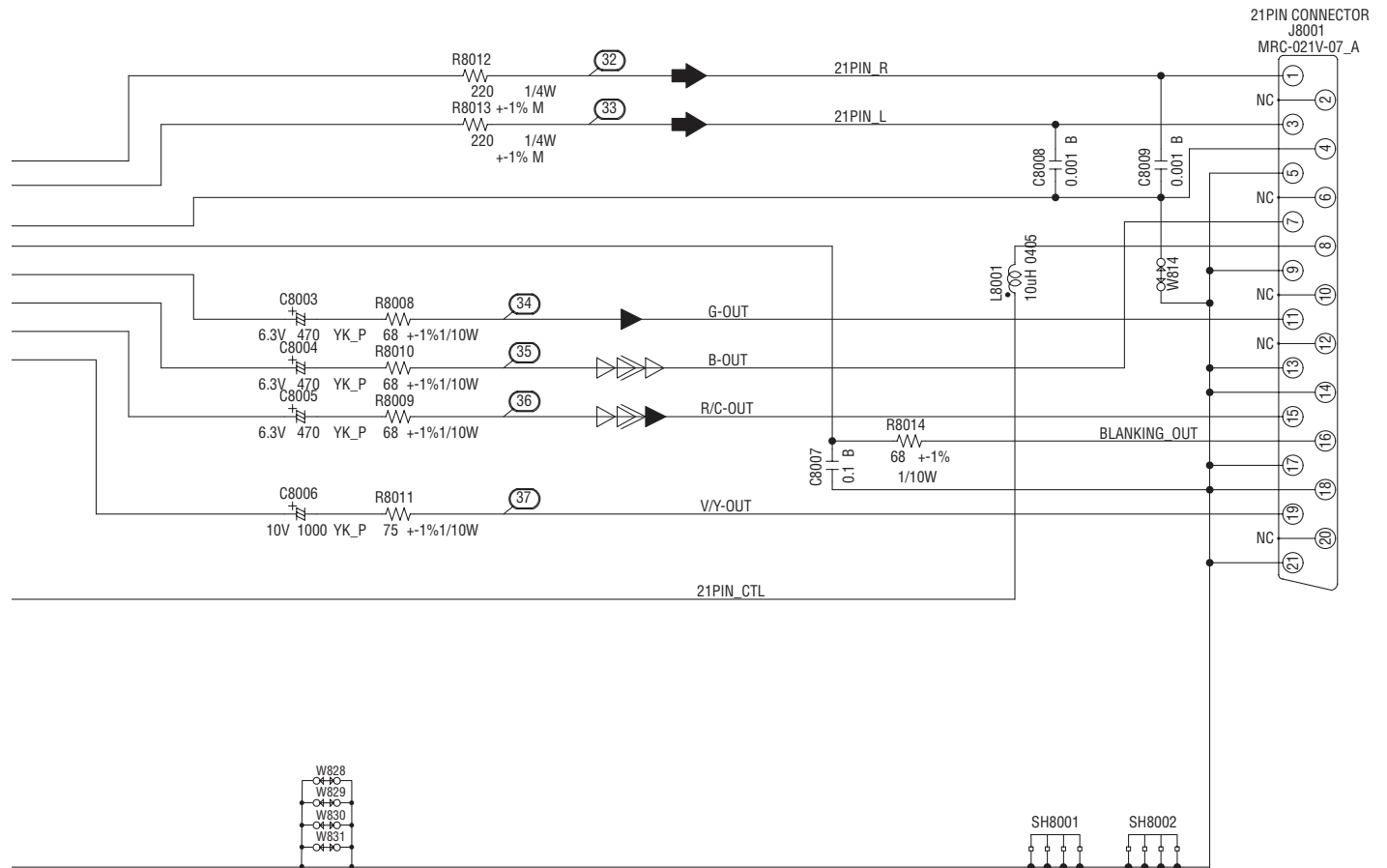


CAUTION: DIGITAL TRANSISTOR



NOTE: THIS SCHEMATIC DIAGRAM IS T
OF PRINTING AND SUBJECT TO (

SCART PCB)



EMATIC DIAGRAM IS THE LATEST AT THE TIME
ING AND SUBJECT TO CHANGE WITHOUT NOTICE .

NOTE:THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

PCB250
DE6138

4

A

B

C



E



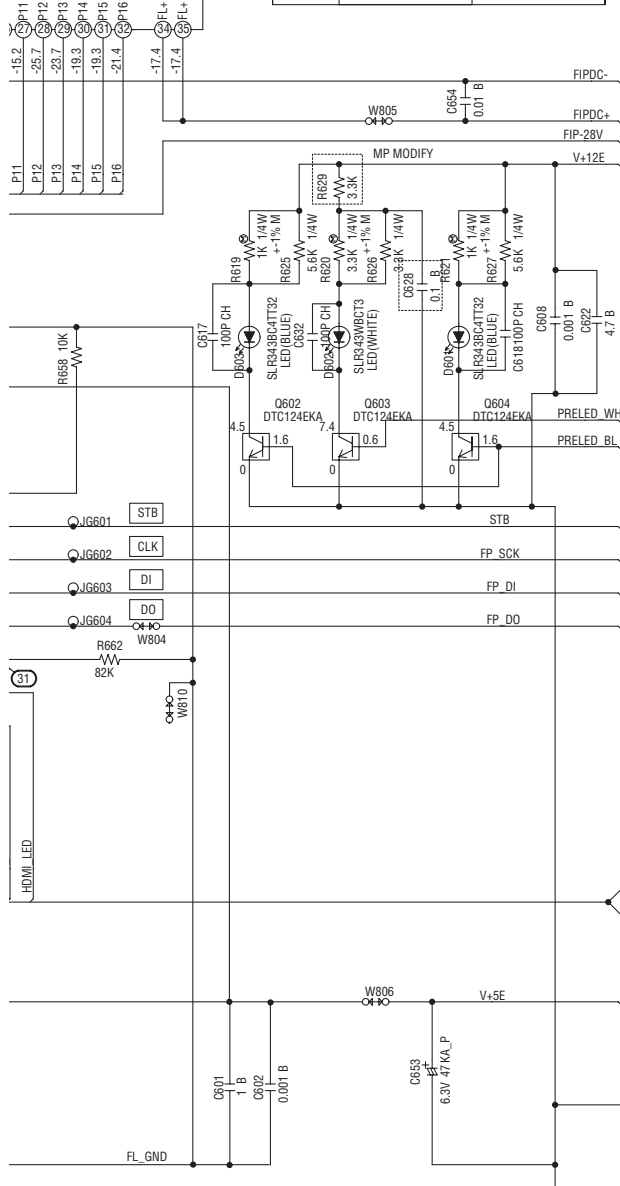
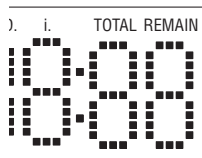
4

CHEMATIC DIAGRAM

PERATION PCB)

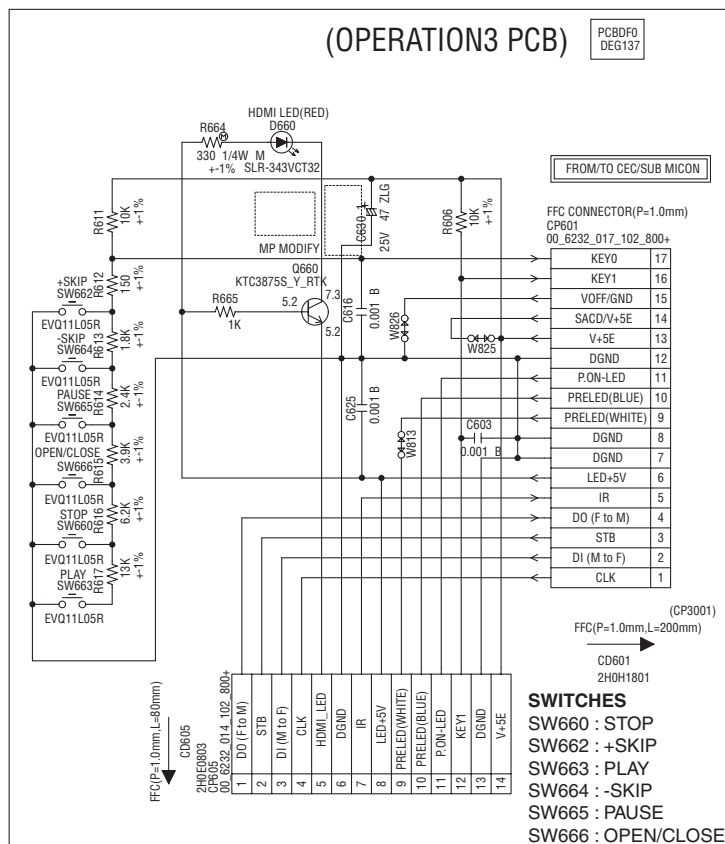
* LED *	Color	VF(typ)	IF(max)	PD(max)
SLR343WBCT	White	3.5	30mA	130mW
SLR343BC4T	Blue	3.2	30mA	120mW
SLR-343VC	Red	2.0	20mA	60mW

REF No.	M2K8(others)	M2K8-03(JP) only
R620	1.8K	1K
R626	1.8K	5.6K
R629,C628	3.3K, 0.1uF	none
W809,W821	none	JP
D602	SLR343WBCT	SLR343BC4T
D601,D603	SLR343BC4T	none
Q602,Q604	KRC102SRTK	none



* KEYO *	Low	High	Function
LV1	0.000	0.357	+SKIP
LV2	0.357	1.071	-SKIP
LV3	1.071	1.786	PAUSE
LV4	1.786	2.500	OPEN/CLOSE
LV5	2.500	3.214	STOP
LV6	3.214	3.929	PLAY
LV7	3.929	4.643	None
None	4.643	5.000	None

OPERATION 3 PCB ASSY (A2K802ADF0)



SWITCHES

SW660 : STOP
SW662 : +SKIP
SW663 : PLAY
SW664 : -SKIP
SW665 : PAUSE
SW666 : OPEN/CLOSE

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

PCB270
DEG135

•

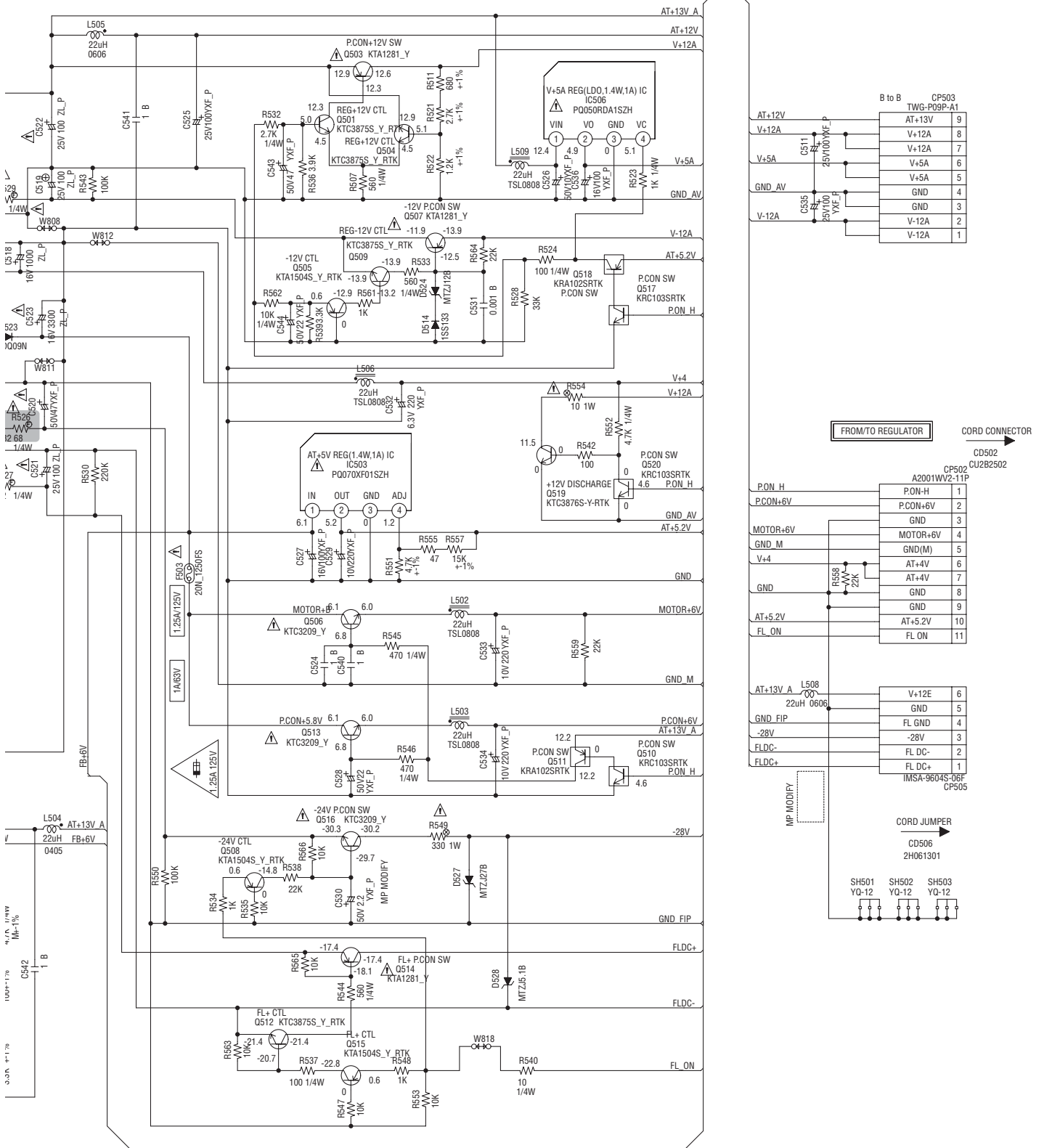
D

(POWER PCB)



ATTENTION: LES PIÈCES RÉPARÉES PAR UN ,
DANGEREUSES AU POINT DE VUE
N'UTILISER QUE CELLES DÉCRITES
DANS LA NOMENCLATURE DES P

GRAM



PIECES REPARÉES PAR UN ETANT GEREUSES AN POINT DE VUE SECURITE ILISER QUE CELLS DECRITES S LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB240
DP015

DV-LX50

10.15 WAVE FORMS

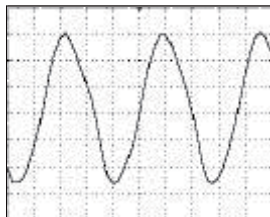
Note : The encircled numbers denote measuring point in the schematic diagram.

DVD MT PCB ASSY

MPEG/MICON

X4001 (XTAL0)
V:0.2V/div. H:10ns/div.

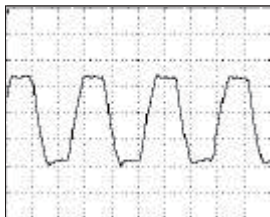
1



DIGITAL AUDIO

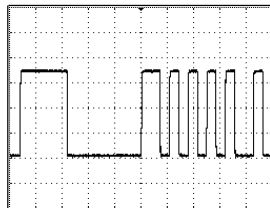
IC4006-pin9 (SW_PMCK/DBCK)
V:1V/div. H: 20ns/div.

7



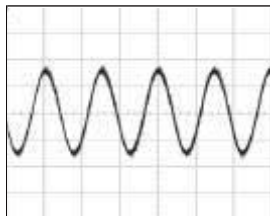
IC4007-pin12(SW_PMCK/DATA1/DSD_C)
V:1V/div. H:1μs/div.

13



IC4002-pin146 (RCLK)
V:0.5V/div. H:5ns/div.

2



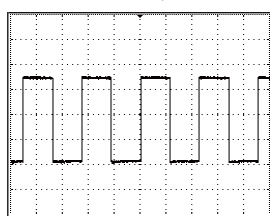
IC4006-pin12 (SW_PBCK/DLOW)
V:1V/div. H:100ns/div.

8



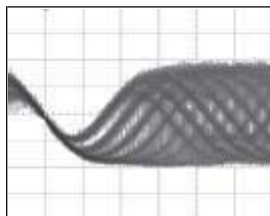
IC4007-pin9 (SW_LRCK/DSD-LFE)
V:1V/div. H:1μs/div.

14



IC4002-pin10 (DVD RFIP)
V:0.2V/div. H:100ns/div.

3



IC4006-pin7(SW_LRCK/DSD-B)
V:1V/div. H:10μs/div.

9



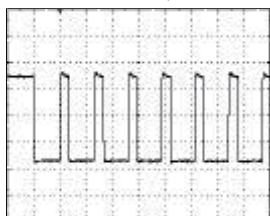
IC4009-pin13 (ASPDIF)
V:1V/div. H:500ns/div.

15



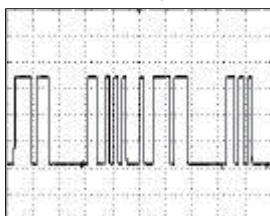
IC4001-pin6 (SCL)
V:1V/div. H:20μs/div.

4



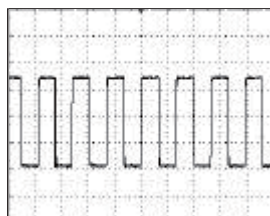
IC4006-pin4 (SW_DATA/DSD-L)
V:1V/div. H:2μs/div.

10



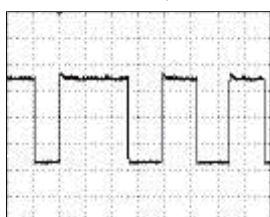
IC4009-pin8 (Optical Out)
V:1V/div. H:500ns/div.

16



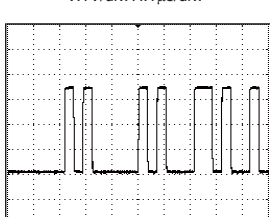
IC4001-pin5 (SDA)
V:1V/div. H:20μs/div.

5



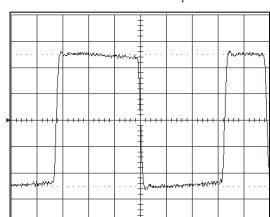
IC4007-pin4 (SW_DATA2/DSD_LS)
V:1V/div. H:1μs/div.

11



JA4001-pin2 (Coaxial Out)
V:0.1V/div. H:0.1μs/div.

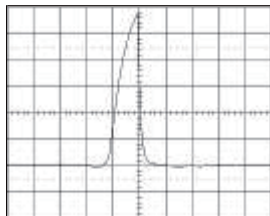
17



MEMORY

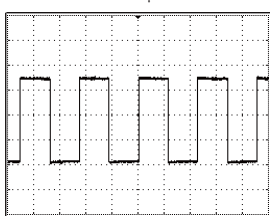
IC4008-pin11 (LE)

6



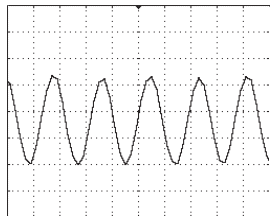
IC4007-pin7 (SW_LRCK/DSD-RS)
V:1V/div. H:1μs/div.

12



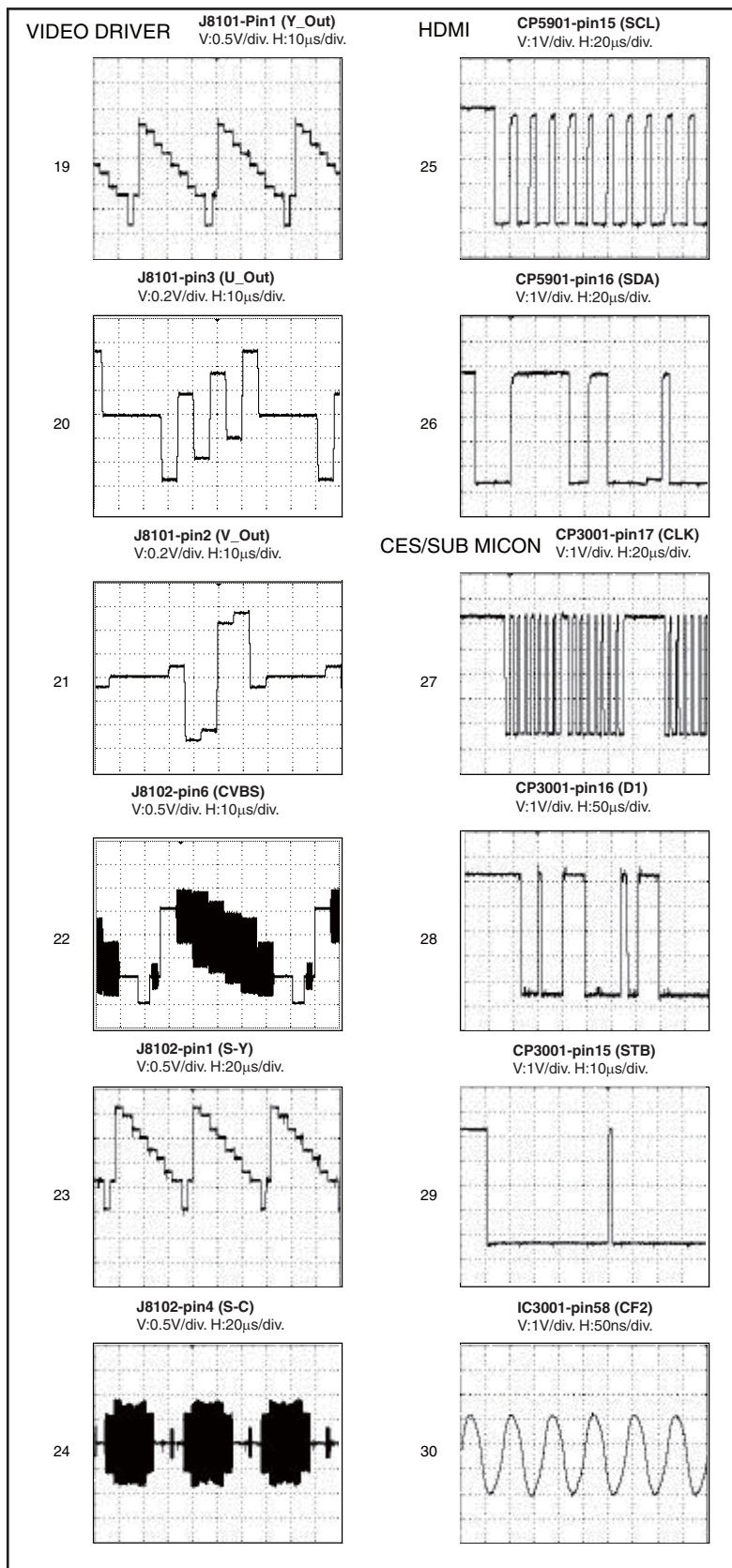
VIDEO DAC IC8501-pin30 (CLKIN_A)
V:1V/div. H:10ns/div.

18

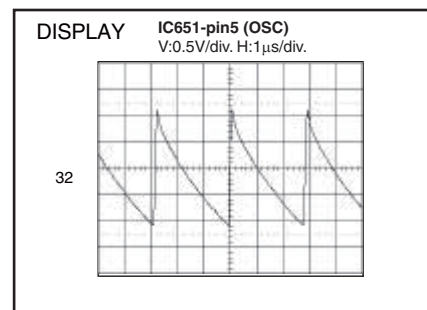


Note : The encircled numbers denote measuring point in the schematic diagram.

DVD MT PCB ASSY



OPERATION1 PCB ASSY



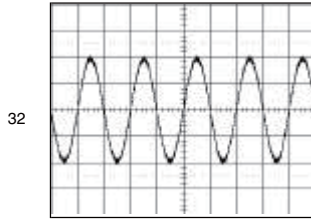
A Note : The encircled numbers denote measuring point in the schematic diagram.

REAR JACK PCB ASSY

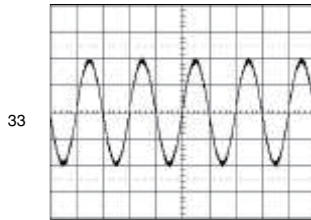
AUDIO PCB ASSY

SCART

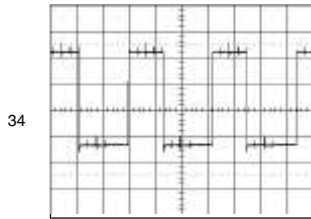
J8001-pin1 (21Pin_R)
V:1V/div. H:0.5ms/div.



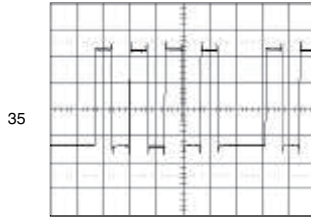
J8001-pin3 (21Pin_L)
V:1V/div. H:0.5ms/div.



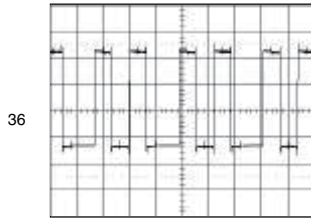
J8001-Pin11 (G-Out)
V:0.2V/div. H:20μs/div.



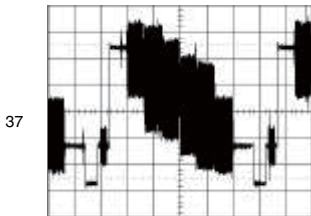
J8001-pin7 (B-Out)
V:0.2V/div. H:10μs/div.



J8001-pin15 (R/C-Out)
V:0.2V/div. H:20μs/div.

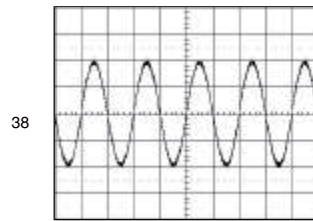


J8001-pin19 (V/Y-Out)
V:0.2V/div. H:10μs/div.

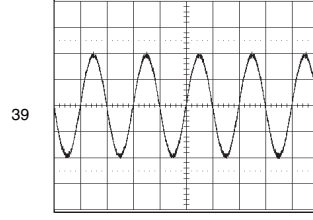


FL/FR

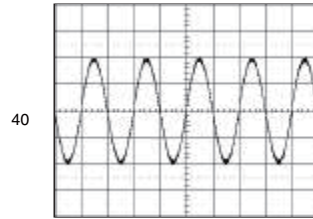
J7003-pin3 (FL)
V:1V/div. H:0.5ms/div.



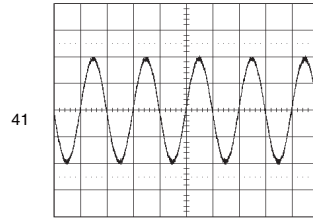
J7001-pin2 (L CH)
V:1V/div. H:0.5ms/div.



J7002-pin2 (R CH)
V:1V/div. H:0.5ms/div.

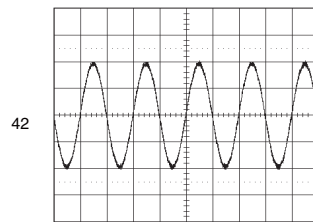


J7003-pin2 (FR)
V:1V/div. H:0.5ms/div.

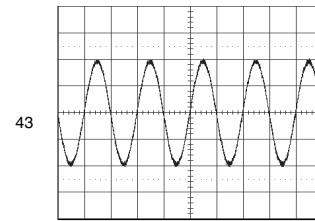


SURROUND

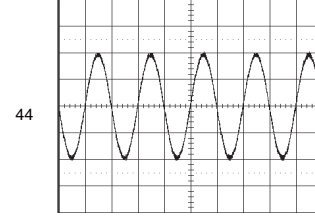
J7004-pin3 (C)
V:1V/div. H:0.5ms/div.



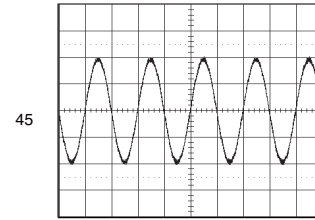
J7004-pin2 (LFE)
V:1V/div. H:0.5ms/div.



J7004-pin6 (SL)
V:1V/div. H:0.5ms/div.




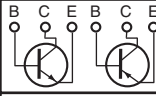

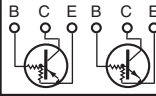

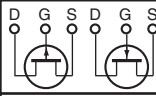

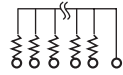


J7004-pin5 (SR)
V:1V/div. H:0.5ms/div.



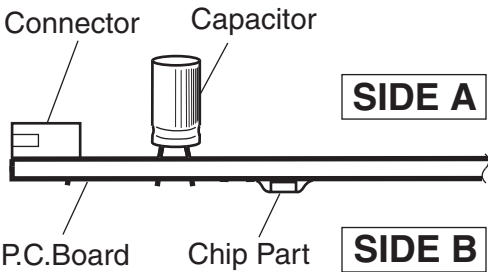
11. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



SIDE A

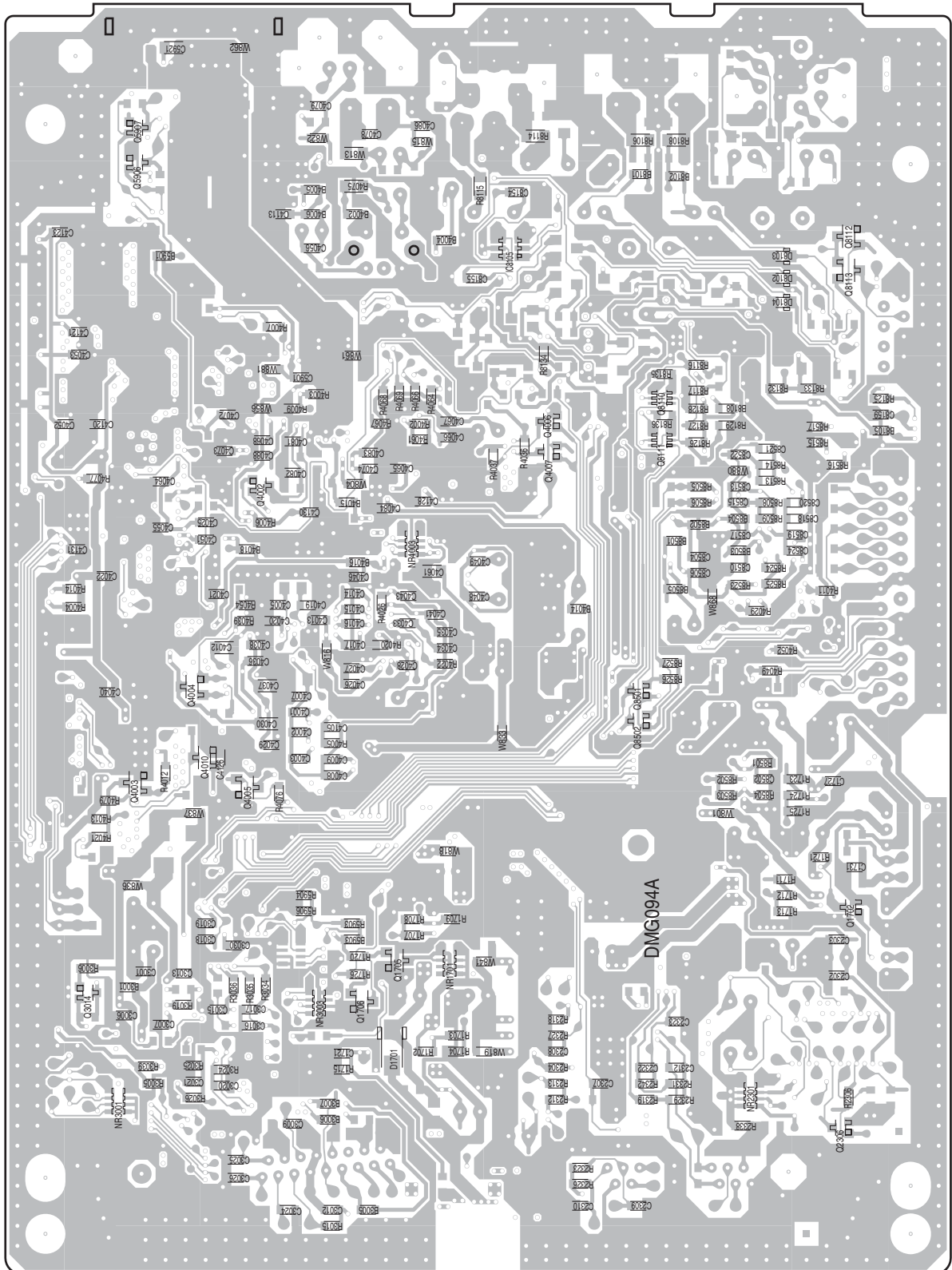
F



SIDE B

SIDE B

DVD MT PCB ASSY

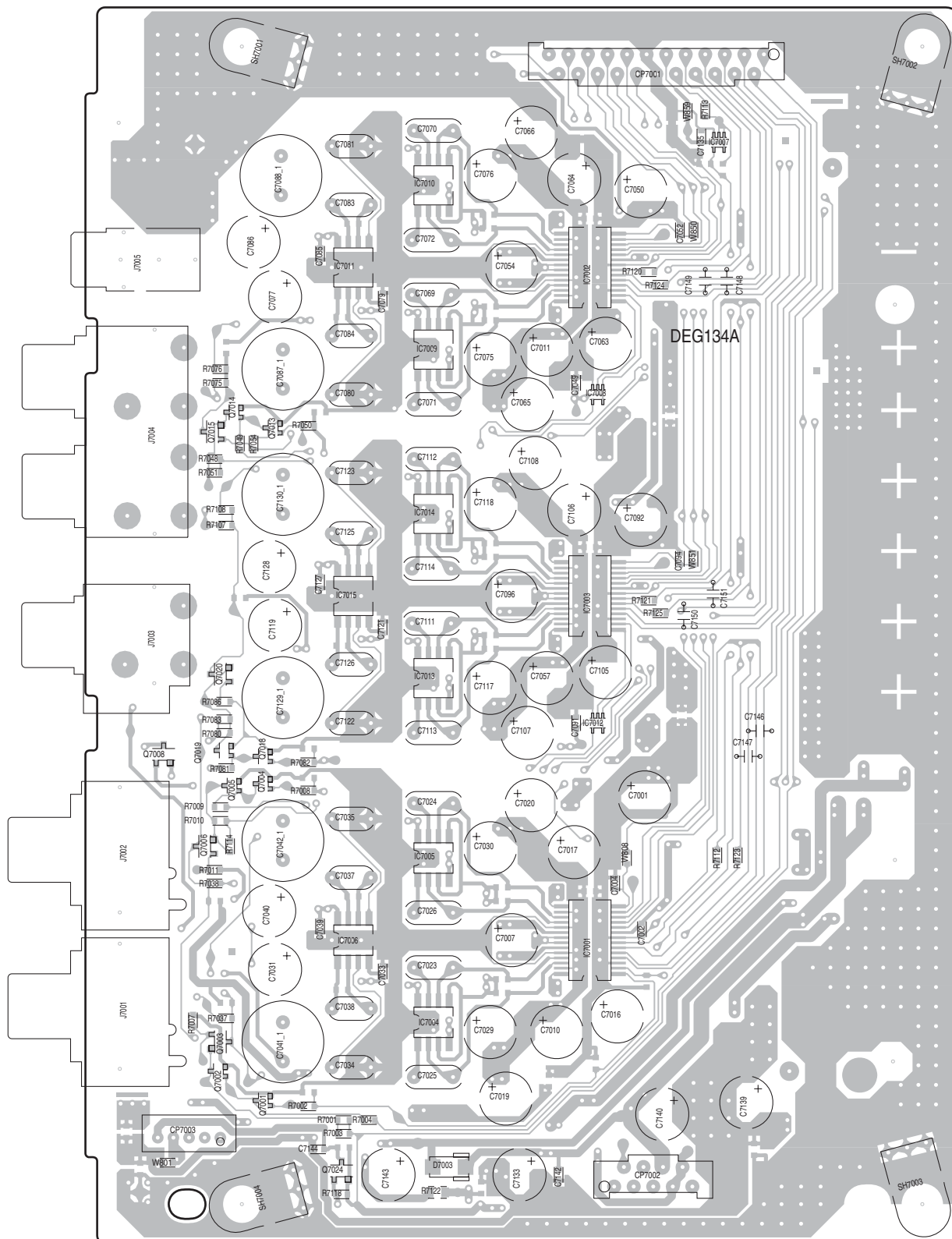


11.2 AUDIO PCB ASSY

SIDE A

SIDE A

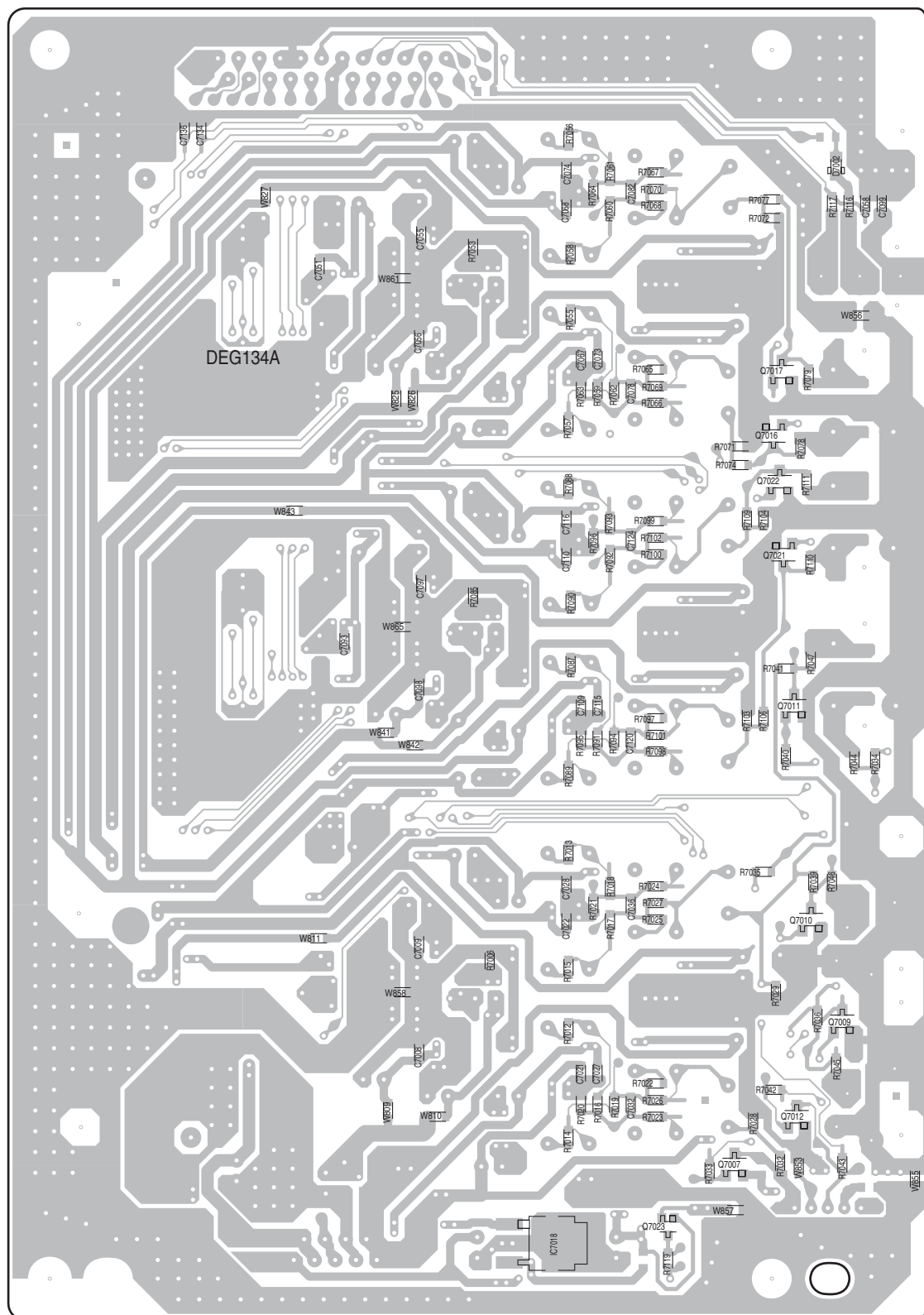
AUDIO PCB ASSY



SIDE B

SIDE B

AUDIO PCB ASSY



11.3 OPERATION1, 2, 3, REAR JACK and POWER PCB ASSYS

SIDE A

(INSERTED PARTS)
POWER PCB ASSY

SIDE A

OPERATION 3 PCB ASSY

OPERATION 1 PCB ASSY

OPERATION 2 PCB ASSY

REAR JACK PCB ASSY

DV-LX50

SIDE B**SIDE B**

(CHIP MOUNTED PARTS)
POWER PCB ASSY

OPERATION 3 PCB ASSY

OPERATION 1 PCB ASSY

OPERATION 2 PCB ASSY

REAR JACK PCB ASSY

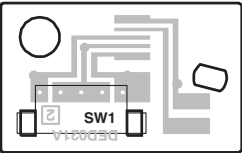
DV-LX50

11.4 LOADING MOTOR and SW ASSYS

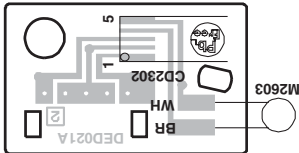
SIDE A

SIDE A

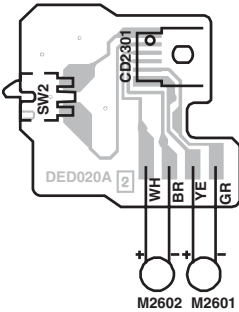
LOADING MOTOR
(INSERTED PARTS)



LOADING MOTOR
(CHIP MOUNTED PARTS)



SW



12. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 ●The Δ mark found on some component parts indicates the importance of the safety factor of the part.
 Therefore, when replacing, be sure to use parts of identical designation.
 ●When ordering resistors, first convert resistance values into code form as shown in the following examples.
 Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	\rightarrow	56 x 10 ¹	\rightarrow	561	.....	RD1/4PU	$\overline{561J}$
47k Ω	\rightarrow	47 x 10 ³	\rightarrow	473	.....	RD1/4PU	$\overline{473J}$
0.5 Ω	\rightarrow	R50	.....			RN2H	$\overline{R50K}$
1 Ω	\rightarrow	1R0	.....			RS1P	$\overline{1R0K}$

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	\rightarrow	562 x 10 ¹	\rightarrow	5621	RN1/4PC	$\overline{5621F}$
----------------	---------------	-----------------------	---------------	------	-------	---------	--------------------

Mark No.	Description	Part No.
----------	-------------	----------

LIST OF ASSEMBLIES

1..DVD MT PCB ASSY(WYXZT5)	A2K802A130
1..DVD MT PCB ASSY(WYXZTUR5)	A2K807A130
1..AUDIO PCB ASSY	A2K802AF70
1..REAR JACK PCB ASSY	A2K802A250
1..OPERATION 1 PCB ASSY	A2K802A270
1..OPERATION 2 PCB ASSY	A2K802A280
1..OPERATION 3 PCB ASSY	A2K802ADF0
Δ 1..POWER PCB ASSY	A2K802A240
1..DVD MECHA ASSY	A2K802A650

(*) A2K802A130 and A2K807A130 have same service parts.
 But they are NOT COMPATIBLE.

Mark No.	Description	Part No.
----------	-------------	----------

DVD MT PCB ASSY

SEMICONDUCTORS

IC1701	IC	BA00BC0WFP-E2	I07F0C0WFO
IC1702	IC	PQ070XZ01ZPH	I0GF91ZPH0
IC1704	IC	PQ1K503M2ZPH	IC0GF9K5030
IC2301	IC	AM5766	I1UFV5766S
IC3001	IC	LC87F5932A-TQFP-E	S2K802AM01
IC3002	IC	BD45281G-TR	I97F052810
IC3003	IC	TC7SH08FU	I55F0SH080
IC4001	IC	S-24CS08AFJ-TB-1GE	I5HJ0S08A0
IC4002	IC	MT1389EXE/S-L	IC8K0389SX
IC4003	IC	R3112N291A-TR-FA	IE1F0291A0
IC4004	IC	ES29LV160EB-70TG	S2K802AF01
IC4005	IC	HY57V641620ETP-6-	ICLJ0TP6C0
IC4006, IC4007	IC	SN74AHC157PWR	I5CJ0C1570
IC4008	IC	SN74LVC373APWR	I5CF0VC370
IC4009	IC	SN74AHCU04PWR	I5CF0CU040
IC8101	IC	LA73054-TLM-E	I03FG30540
IC8102	IC	THS7303PWR	I5CJ073030
IC8103	IC	TS3V340PWR	I5CJ0V3400
IC8104	IC	MM1505XNRE	I0UF015050
IC8105	IC	MM1507XNRE	I0UF015070
IC8501	IC	ADV7340BSTZ	IFDF073400
IC8502	IC	PQ070XZ5MZPH	I0GF9Z5MZ0

Mark No.	Description	Part No.
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OTHERS

J4001	RCA JACK	060K401138
J8101	RCA JACK	060K401134
J8102	JACK PLATE	063Y000093
CP5901	CONNECTOR PCB SIDE	0694YJ3038
OS4001	OPTICAL DEVICE	07AE000013
X3001	CERAMIC (12 MHz)	1002T01216
X4001	CRYSTAL (27MHz)	100GT02720

AUDIO PCB ASSY

SEMICONDUCTORS

IC7001	PCM1796DBR	I17F017960
IC7004	OPA2134UA/2K5	I0CF021340
IC7007, IC7008	TCSH08FU	I55F0SH080
IC7009-IC7011	NJM5532M-D	I0QF055320
IC7018	KIA78D33F	I1KF98D330

OTHERS

J7001	RCA JACK T6997-AABB	060M401136
J7002	RCA JACK T6997-AACB	060M401135
J7003	RCA JACK RCA-207BG-02	060R451016
J7004	RCA JACK RCA-405AGG-54	060R451015
J7005	HEADPHONE JACK	060J121018

REAR JACK PCB ASSY

OTHERS

J8101	SOCKET, 21PIN	063D100050
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OPERATION 1 PCB ASSY

SEMICONDUCTORS

IC651	IC	PT6315	IF4K063150
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OTHERS

V651	TUBE FLUORESCENT	0967B2R601
OS651	REMOTE RECEIVER	077A031004

OPERATION 2 PCB ASSY

SWITCHES

SW601 - SW603	SWITCH TACT	0504R01T38
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OPERATION 3 PCB ASSY

SWITCHES

SW660, SW663 - SW666	SWITCH TACT	0504R01T38
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<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
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POWER PCB ASSY

RESISTORS

A	 R526 R,FUSE 68 OHM 1/4W	R65584680J
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